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The July 1983

Massachusetts Economic Policy Analysis (MEPA)

Short-term Economic Forecast

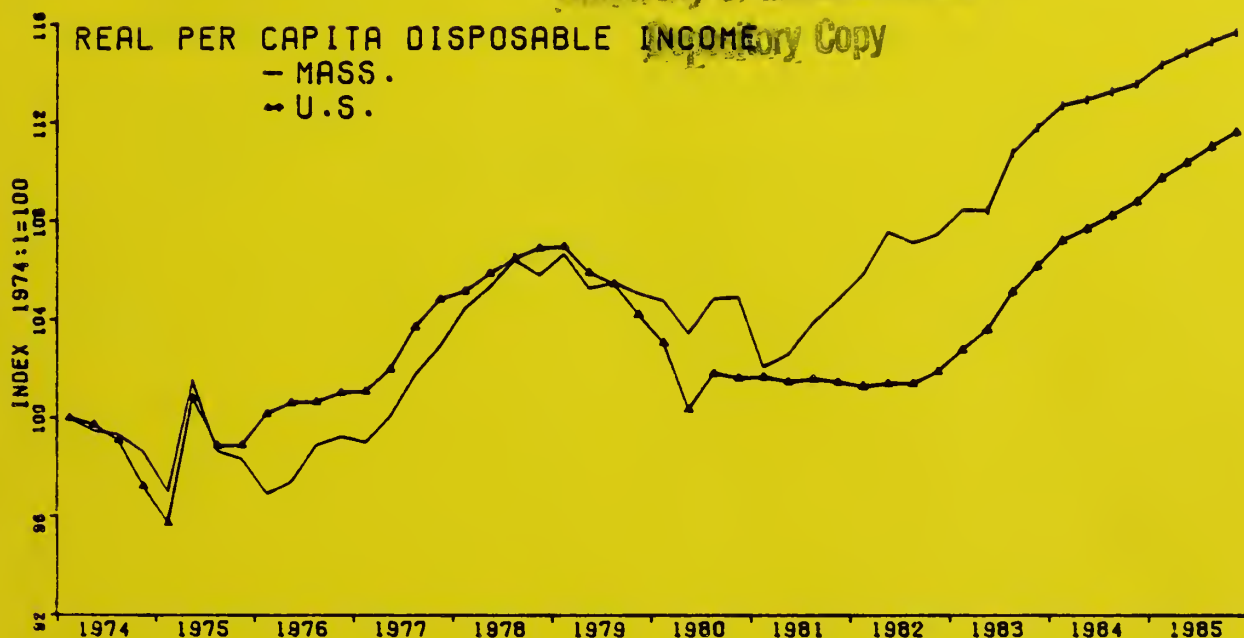
by

Roy Williams and Margaret Larson*

GOVERNMENT DOCUMENTS
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DEC 7 1983

University of Massachusetts



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Support from the Department of Public Welfare, the Division of Employment Security, the Department of Commerce and Development, the Metropolitan District Commission, Massport, and the Massachusetts Development Research Institute. National inputs from CONTROL062783 from Data Resources, Inc.

The July 1983

Massachusetts Economic Policy Analysis (MEPA)

Short-term Economic Forecast

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The July 1983

Massachusetts Economic Policy Analysis (MEPA)

Short-term Economic Forecast

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The vigor of the national economic recovery is not fully matched by Massachusetts' experience according to industrial employment data available at the time this forecast was produced in July. Data for April and May showed many sectors still declining or remaining at their minimum recession levels. The combination of a more optimistic national forecast (CONTROL,06/27/83) from Data Resources, Incorporated (DRI), and evidence of a lagging recovery in the state leads to a state forecast only very little improved from the April forecast in terms of the primary indicators of employment, wages, prices, and incomes. Since Massachusetts suffered a less severe recession than the rest of the nation, we continue to expect a less pronounced recovery here in Massachusetts.

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Support from the Department of Public Welfare, the Division of Employment Security, the Department of Commerce and Development, the Metropolitan District Commission, Massport, and the Massachusetts Development Research Institute. National inputs from CONTROL062783 from Data Resources, Inc.

Recent data from the Current Population Survey present the brightest picture of recovery, but they are based on a very small sample (about 1500 households in Massachusetts). Strong growth in total employment on this household basis in the second quarter of 1983 contrasts strikingly with a small drop in total non-agricultural employment estimated from industry data. The marked improvement in the unemployment rate since our last forecast may be due in part to unemployed people who give up searching for a job and hence become classified as non-participants in the labor force. Ironically, the psychological effect of this sharp drop in the official unemployment rate may be to encourage other discouraged workers to rejoin the ranks of the unemployed by actively seeking work. The extraordinary figures for the month of July, released since our forecast was completed, cannot be expected to continue, as the labor force participation rate resumes its long-run gradual increase both here and in the rest of the nation.

Inflation in consumer prices is expected to average 4.3% for 1983, rising slightly in each of the two following years approximately in line with national prices. The inflation outlook is somewhat better than in our previous forecast, although this is primarily due to improvements in the national inflation forecast. Average wages will increase 6% in 1983, slightly faster than price inflation. Although average wages and salaries per worker will not keep pace with price inflation after 1983, the recovery and the federal income tax cuts will lead to significant increases in real disposable incomes on a per person basis through 1985. Wages in Massachusetts will increase slightly faster than wages in the U.S., but real per-capita incomes here will increase more slowly than in the U.S.

The overall cost of doing business in Massachusetts relative to the cost elsewhere is expected to increase slightly over the next two years, making Massachusetts a relatively less desirable location for conducting business. This factor is most crucial to industries which serve national markets, yet even some businesses which serve local markets could be affected by more cost-competitive imports. We continue to expect declining shares of U.S. total employment in most Massachusetts industries. Many of the state's relatively large high-tech industries, particularly SIC 357 (Office & Computing Machinery) and SIC 367 (Electronic Components), are forecast to grow significantly especially in the short-term, yet U.S. growth in these industries is expected to be faster than in Massachusetts. Thus employment even in these industries is expected to represent a slightly declining share of total national employment. Only a few industries in Massachusetts are forecast to gain in share, most notably SIC 382 (Measurement & Control Instruments).

The mix of Massachusetts industries which served well in postponing the onset of the recession here and in minimizing its depth, now may cause the recovery to lag behind that of the consumer-goods producing and sun-belt states most heavily impacted by the national recession.

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JULY CONTROL FORECAST (T4)

SUMMARY REPORT

MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Units as Indicated)

	1981	1982	1983	1984	1985
Employment--Total Nonag.*	2668	2622	2629	2702	2765
% Change	.6	-1.7	.2	2.8	2.3
Manufacturing*	669	637	616	632	638
% Change	-.8	-4.9	-3.3	2.6	1.0
Non-Manufacturing*	1999	1985	2013	2071	2127
% Change	1.1	-.7	1.4	2.9	2.7
Unemployment Rate	6.3	7.9	7.3	6.6	6.1
Employment Rate Index**	105.6	103.0	102.4	104.6	106.3
% Change	-.6	-2.5	-.5	2.1	1.7
Relative to U.S. Index**	102.7	103.1	103.4	103.1	102.7
Rate of Wage Change	8.2	7.8	6.0	4.3	4.2
Wage Index Rel. to U.S.**	92.7	93.5	94.5	94.8	94.9
Avg. Weekly Hours in Mfg.	40.1	39.4	39.8	40.2	40.3
Rate of Price Inflation	11.1	4.2	4.3	4.6	4.9
Relative to U.S. CPI**	96.7	94.9	95.8	95.9	96.1
Personal Income (mil\$)	64244	68913	73322	79070	84848
% Change	11.3	7.3	6.4	7.8	7.3
Disposable Income (mil\$)	53177	57420	61652	66729	71483
% Change	10.5	8.0	7.4	8.2	7.1
Real Per Cap. D.I. Index**	102.2	105.8	108.6	111.8	113.7
Relative to U.S.**	101.7	105.3	105.1	104.6	103.8
Rel. Business Cost Index**	95.3	95.4	95.9	96.1	96.1
Manufacturing**	94.8	94.9	95.6	95.7	95.8
<u>Non-Manufacturing**</u>	95.5	95.7	96.0	96.2	96.3

*Thousands of people.

**Indexes equal 100 in calendar 1973.

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JULY CONTROL FORECAST (T4)

EMPLOYMENT IN MASSACHUSETTS--INDUSTRY DETAIL
(Thousands of People)

	1981	1982	1983	1984	1985
Manufacturing	669.4	636.9	615.6	631.6	637.8
As % of U.S.	3.32	3.38	3.31	3.26	3.21
Durables	411.6	391.9	375.5	387.0	392.0
Lumber, Furntr. (24/25)	13.0	11.4	11.9	12.3	12.2
Stone, Clay, etc. (32)	12.8	11.7	10.6	10.9	10.8
Primary Metals (33)	17.2	15.4	14.6	16.2	17.5
Fabricated Metals (34)	51.5	47.3	44.1	45.0	45.4
Non-elec. Machin. (35)	109.9	104.5	97.8	101.0	102.6
Elec. Equipment (36)	112.2	111.7	109.1	111.9	111.9
Transport. Equip. (37)	33.2	30.9	31.6	32.6	33.1
Instruments (38)	61.7	59.0	55.7	57.1	58.5
Nondurables	257.9	245.0	240.2	244.7	245.8
Food (20)	25.4	24.7	24.4	24.4	24.3
Textiles (22)	24.3	20.9	20.9	21.0	20.6
Apparel (23)	39.6	37.3	37.1	37.6	37.4
Paper (26)	27.2	26.2	25.5	25.7	25.7
Printing (27)	45.1	45.5	44.2	44.8	45.4
Chemicals (28)	18.4	17.5	17.0	17.1	17.2
Rubber (30)	29.5	29.4	30.0	32.1	33.0
Leather (31)	20.9	18.6	17.2	16.9	16.7
Other Nondurables (39)	27.5	24.8	23.8	25.0	25.4
Nonmanufacturing	1998.6	1985.3	2013.1	2070.8	2126.7
Contract Construction	79.7	78.5	74.2	79.3	86.8
Transport & Utilities	120.1	118.8	118.3	118.4	117.8
Wholesale & Retail Trade	579.0	570.1	572.9	583.0	598.4
Finance, Insurance, etc.	164.8	168.2	172.2	178.0	183.4
Services & Miscellaneous	664.2	682.4	708.5	738.8	760.7
Government	391.0	367.3	367.0	373.4	379.6
Federal	57.4	55.8	55.6	57.3	59.2
State	97.4	91.7	93.7	93.8	94.5
Local	236.2	219.7	217.6	222.3	225.9
Nonag. Wage & Sal. Employ.*	2668.0	2622.2	2628.7	2702.5	2764.5
As % of U.S.	2.93	2.93	2.92	2.90	2.88

*Establishment basis (CES Survey).

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JULY CONTROL FORECAST (T4)

MASSACHUSETTS EMPLOYMENT, POPULATION, AND LABOR FORCE
(Thousands of People)

	1981	1982	1983	1984	1985
Nonag. Wage & Sal. Employ.*	2668.0	2622.2	2628.7	2702.5	2764.5
As % of U.S.	2.93	2.93	2.92	2.90	2.88
Plus: All Other Nonag.	164.0	172.0	176.5	182.3	186.6
Plus: Agriculture	26.6	25.7	24.7	24.7	24.7
Total Mass. Jobs	2858.6	2820.0	2829.9	2909.5	2975.9
Less: Adjustments**	86.0	43.4	47.8	54.5	58.5
Total Employment***	2772.7	2776.6	2782.1	2855.0	2917.4
As % of U.S.	2.76	2.79	2.77	2.76	2.74
Mass. Population	5774.0	5781.0	5796.5	5827.6	5854.1
As % of U.S.	2.51	2.49	2.48	2.46	2.45
Mass. Populn. 16 and Over	4439.3	4476.0	4510.0	4541.1	4568.6
Mass. Employment Rate****	60.1	58.6	58.3	59.5	60.5
Indexed to 1973	105.6	103.0	102.4	104.6	106.3
U.S. Employment Rate	52.9	51.4	51.0	52.2	53.3
Mass. Index Rel. To U.S.	102.7	103.1	103.4	103.1	102.7
Labor Force	2960.8	3015.1	3001.3	3058.2	3106.8
Participation Rate	66.7	67.4	66.5	67.3	68.0
U.S. Participation Rate	63.1	63.2	63.0	63.7	64.3
Number of Unemployed	188.1	238.5	219.2	203.3	189.4
Unemployment Rate	6.3	7.9	7.3	6.6	6.1
<u>U.S. Unemployment Rate</u>	7.6	9.7	9.8	8.8	8.3

*Establishment basis (CES Survey).

**Adjustments for double counting and place of residence.

***Household basis (Current Population Survey).

****Total nonag. employment divided by the population sixteen and over.

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JULY CONTROL FORECAST (T4)

MANUFACTURING EMPLOYMENT IN MASSACHUSETTS
(Thousands of People)

	1981	1982	1983	1984	1985
Manufacturing	669.4	636.9	615.6	631.6	637.8
As % of U.S.	3.32	3.38	3.31	3.26	3.21
Durables	411.6	391.9	375.5	387.0	392.0
Lumber, Furniture (24/25)	13.0	11.4	11.9	12.3	12.2
Stone, Clay, Glass (32)	12.8	11.7	10.6	10.9	10.8
Primary Metals (33)	17.2	15.4	14.6	16.2	17.5
Fabricated Metals (34)	51.5	47.3	44.1	45.0	45.4
Non-elec. Machin. (35)	109.9	104.5	97.8	101.0	102.6
Engines & Turbines (351)	6.4	6.0	5.1	5.4	5.8
Metalworking Mach. (354)	17.2	15.0	12.4	12.7	12.6
Spec. Industry M. (355)	16.3	14.4	12.1	11.6	11.4
Gen. Industrial M. (356)	9.0	8.3	7.1	7.0	7.0
Off. & Comput. M. (357)	48.8	49.9	51.2	53.4	54.4
Rest of Industry	12.1	10.9	9.9	10.8	11.5
Elec. Equipment (36)	112.2	111.7	109.1	111.9	111.9
Electronic Compon. (367)	50.6	52.1	52.1	54.4	55.5
Rest of Industry	61.6	59.6	57.0	57.5	56.4
Transport. Equip. (37)	33.2	30.9	31.6	32.6	33.1
Mot. Vehicles & P. (371)	5.7	4.6	5.1	5.4	5.5
Aircraft & Parts (372)	10.3	9.7	9.9	10.0	10.3
Rest of Industry	17.2	16.5	16.6	17.1	17.3
Instruments (38)	61.7	59.0	55.7	57.1	58.5
Meas. & Control (382)	23.2	22.3	21.0	21.9	22.8
Rest of Industry	38.6	36.7	34.6	35.3	35.7
Nondurables	257.9	245.0	240.2	244.7	245.8
Food (20)	25.4	24.7	24.4	24.4	24.3
Textiles (22)	24.3	20.9	20.9	21.0	20.6
Apparel (23)	39.6	37.3	37.1	37.6	37.4
Paper (26)	27.2	26.2	25.5	25.7	25.7
Printing (27)	45.1	45.5	44.2	44.8	45.4
Chemicals (28)	18.4	17.5	17.0	17.1	17.2
Synthet. Materials (282)	5.5	5.0	4.8	4.9	5.0
Rest of Industry	12.8	12.5	12.2	12.3	12.3
Rubber (30)	29.5	29.4	30.0	32.1	33.0
Leather (31)	20.9	18.6	17.2	16.9	16.7
Other Nondurables (39)	27.5	24.8	23.8	25.0	25.4

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JULY CONTROL FORECAST (T4)

EMPLOYMENT IN MASSACHUSETTS AS A PER CENT OF U.S. EMPLOYMENT

	1981	1982	1983	1984	1985
Durables	3.40	3.53	3.45	3.38	3.32
Lumber (24)	.79	.77	.75	.73	.71
Furniture (25)	1.65	1.57	1.53	1.50	1.47
Stone, Clay, Glass (32)	2.01	2.03	1.83	1.79	1.76
Primary Metals (33)	1.54	1.67	1.73	1.71	1.70
Fabricated Metals (34)	3.23	3.29	3.18	3.10	3.04
Non-elec. Machin. (35)	4.38	4.62	4.70	4.51	4.36
Engines & Turbines (351)	4.78	5.27	5.11	4.86	4.69
Metalworking Mach. (354)	4.73	4.69	4.47	4.26	4.04
Spec. Industry M. (355)	8.18	8.02	7.33	6.78	6.40
Gen. Industrial M. (356)	2.81	2.93	2.80	2.67	2.59
Off. & Comput. M. (357)	10.53	10.22	10.40	10.36	10.22
Rest of Industry Group	1.18	1.25	1.24	1.23	1.22
Elec. Equipment (36)	5.36	5.54	5.39	5.34	5.29
Electronic Compon. (367)	9.04	9.16	8.88	8.86	8.80
Rest of Industry Group	4.02	4.12	3.96	3.89	3.80
Transport. Equip. (37)	1.76	1.77	1.79	1.77	1.76
Mot. Vehicles & P. (371)	.73	.68	.71	.71	.72
Aircraft & Parts (372)	1.59	1.58	1.68	1.68	1.68
Rest of Industry Group	3.74	3.66	3.68	3.59	3.47
Instruments (38)	8.49	8.10	8.04	8.19	8.24
Meas. & Control (382)	9.00	9.14	8.99	9.26	9.43
Rest of Industry Group	8.22	7.57	7.56	7.64	7.62
Nondurables	3.20	3.16	3.11	3.09	3.05
Food (20)	1.52	1.51	1.50	1.47	1.44
Textiles (22)	2.95	2.79	2.83	2.73	2.64
Apparel (23)	3.18	3.21	3.23	3.22	3.17
Paper (26)	3.96	3.96	3.87	3.79	3.71
Printing (27)	3.56	3.58	3.45	3.40	3.38
Chemicals (28)	1.66	1.62	1.60	1.60	1.59
Synthet. Materials (282)	2.84	2.73	2.69	2.68	2.67
Rest of Industry Group	1.41	1.40	1.38	1.38	1.37
Rubber (30)	4.01	4.20	4.17	4.19	4.21
Leather (31)	8.96	8.43	8.01	7.76	7.59
Other Nondurables (39)	6.69	6.42	6.18	6.22	6.22
Nonmanufacturing	2.86	2.85	2.86	2.85	2.83
Contract Construction	1.91	2.01	1.90	1.89	1.93
Transport & Utilities	2.33	2.34	2.37	2.34	2.30
Wholesale & Retail Trade	2.82	2.79	2.80	2.78	2.74
Finance, Insurance, etc.	3.11	3.15	3.16	3.14	3.10
Services & Miscellaneous	3.57	3.58	3.59	3.57	3.53
Government	2.44	2.32	2.33	2.34	2.34
Federal	2.07	2.04	2.01	2.00	2.00
State & Local	2.52	2.38	2.39	2.41	2.42

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JULY CONTROL FORECAST (T4)

PERSONAL INCOME IN MASSACHUSETTS
(Millions of Dollars)

	1981	1982	1983	1984	1985
INCOME BY PLACE OF WORK					
Wage & Sal. Disbursements	40435	42791	45457	48894	52135
Other Labor Income	3823	4297	4645	4980	5435
Proprietors' Income	2468	2481	2887	3294	3510
Total Labor & Propr. Inc.	46726	49569	52989	57168	61080
Breakdown by Industry:					
Farm	118	113	108	119	126
Manufacturing	13833	14348	15037	16242	17208
Durables	9792	10218	10619	11502	12214
Nondurables	4042	4131	4418	4741	4994
Construction	1820	1961	1973	2206	2497
Trade	7320	7651	8144	8697	9309
Finance, Ins., & R.E.	3058	3402	3758	4053	4361
Transportation & Util.	3027	3218	3418	3589	3754
Services & Misc.	10979	12173	13507	14776	15857
Government	6572	6704	7044	7485	7967
Federal	1608	1672	1759	1881	2034
State & Local	4965	5032	5284	5604	5933

DERIVATION OF PERSONAL INCOME BY PLACE OF RESIDENCE

Total L&P, Place of Work	46726	49569	52989	57168	61080
Less: Soc. Insr. Contr.	2663	2881	3105	3447	3718
Plus: Residence Adjmt.	-317	-352	-386	-414	-442
Plus: Div., Int., & Rent	11073	12293	12896	14277	15819
Plus: Transfer Payments	9423	10284	10927	11485	12109
State Unempl. Benefits	354	489	587	567	551
All Other Transfers	9070	9795	10340	10918	11558
Personal Inc., Pl of Res.	64244	68913	73322	79070	84848
Less: Fed. Income Tax	8011	8134	8089	8447	9159
Less: Mass. Income Tax	2220	2433	2560	2787	3018
Less: Other Mass. Taxes	836	926	1021	1107	1189
Dispos. P.I., Pl of Res.	53177	57420	61652	66729	71483
Boston CPI, 1967 = 100	266.6	277.7	289.7	302.9	317.7
Real D.P.I., '67 Dollars	19945	20672	21281	22026	22501
Real D.P.I., Per Capita	3.454	3.576	3.671	3.780	3.844
% Change	-1.1	3.5	2.7	2.9	1.7

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JULY CONTROL FORECAST (T4)

SUMMARY REPORT

MASSACHUSETTS EARNED FAMILY INCOME DISTRIBUTION MODEL
OF ANNUALIZED WORKING-PERIOD EARNINGS

	1981	1982	1983	1984	1985
Per Cent of Families with Female Head					
	18.15	18.79	19.43	20.06	20.69
Per Cent of Named Group without Earnings					
All Families	9.57	10.27	10.19	9.80	9.50
Male Headed Fams.	5.02	5.40	5.26	5.10	4.96
Female Headed Fams.	30.08	31.28	30.63	28.50	26.88
No. of Families (000)	1208.2	1203.6	1198.7	1195.1	1189.0
With Earnings	1092.6	1080.1	1076.5	1078.0	1076.1
Without Earnings	115.6	123.6	122.2	117.1	112.9
Average Earnings of All Families					
In Nominal Dollars	30267	32150	34295	36999	39655
In 1972 Dollars	14430	14713	15047	15522	15865
Average Earnings of Those with Earnings					
In Nominal Dollars	33471	35829	38186	41018	43814
In 1972 Dollars	15957	16396	16754	17208	17529
Total Earnings (mil \$)	36566	38696	41108	44216	47146
Displaced Log-Normal Parameters (Families with Earnings)					
Gini Coefficient	.3279	.3328	.3387	.3398	.3427
Displacement	.5197	.6082	.5750	.5379	.5059
Standard Deviation	.3866	.3702	.3850	.3959	.4080
Mean -- Nom. \$ Dist.	10.76	10.89	10.93	10.97	11.01
Mean -- 1972 \$ Dist.	10.02	10.11	10.11	10.11	10.10

EXPLANATORY VARIABLES

Population 18 thru 64	3583.7	3602.4	3620.0	3642.2	3657.0
Tot. Nonag. Employment	2668.0	2622.2	2628.7	2702.5	2764.5
M & R Emp. (% of Tot.)	29.59	28.82	27.92	27.75	27.33
Female Employment	1112.7	1104.8	1117.7	1150.4	1176.8
As % of Popul. 18-64	31.05	30.67	30.87	31.59	32.18
Unemployment Rate	6.3	7.9	7.3	6.6	6.1
Wage/Sal Disbursements	40435	42791	45457	48894	52135
WSD per Employee	15.155	16.320	17.291	18.091	18.857
Wage Acceleration	NA	NA	NA	NA	NA
C.P.I. (Boston)	266.6	277.7	289.7	302.9	317.7

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JULY CONTROL FORECAST (T4)

PER CENT OF MASSACHUSETTS FAMILIES
WITH EARNED FAMILY INCOME IN GIVEN NOMINAL DOLLAR CLASSES
(MEFID MODEL OF ANNUALIZED WORKING-PERIOD EARNINGS)

	1981	1982	1983	1984	1985
EARNINGS CLASS: (Nominal Dollars)					
\$0	9.57	10.27	10.19	9.80	9.50
1 and over	90.43	89.73	89.81	90.20	90.50
\$1 - 999	.66	.91	.94	.86	.82
1000 - 1999	.30	.32	.31	.28	.26
2000 - 2999	.38	.40	.38	.34	.31
3000 - 3999	.48	.48	.46	.41	.37
4000 - 4999	.59	.57	.54	.48	.44
5000 - 5999	.71	.66	.62	.55	.50
6000 - 6999	.83	.76	.71	.63	.57
7000 - 7999	.95	.86	.79	.71	.64
8000 - 8999	1.08	.96	.88	.79	.71
9000 - 9999	1.21	1.06	.97	.87	.78
10000 - 10999	1.33	1.16	1.06	.94	.86
11000 - 11999	1.45	1.25	1.15	1.02	.93
12000 - 12999	1.56	1.35	1.23	1.10	.99
13000 - 13999	1.66	1.43	1.31	1.17	1.06
14000 - 14999	1.75	1.51	1.38	1.24	1.13
15000 - 19999	9.81	8.55	7.82	7.08	6.46
20000 - 24999	10.60	9.48	8.75	8.07	7.44
25000 - 34999	19.50	18.40	17.44	16.60	15.69
35000 - 49999	19.42	20.09	20.15	20.33	20.15
50000 and over	16.15	19.55	22.91	26.75	30.39
20000 and over	65.67	67.52	69.25	71.75	73.67
\$0 - 1000	10.23	11.18	11.13	10.66	10.32
0 - 2000	10.53	11.50	11.44	10.94	10.58
0 - 4000	11.40	12.37	12.28	11.69	11.27
0 - 6000	12.70	13.60	13.44	12.71	12.20
0 - 9000	15.56	16.17	15.82	14.83	14.12
0 - 12000	19.54	19.64	19.01	17.66	16.69
0 - 15000	24.51	23.93	22.93	21.17	19.87
0 - 20000	34.33	32.48	30.75	28.25	26.33
0 - 25000	44.93	41.96	39.50	36.32	33.77
0 - 35000	64.43	60.36	56.94	52.92	49.46
0 - 50000	83.85	80.45	77.09	73.25	69.61

83/07/28

JULY CONTROL FORECAST (T4)

SUMMARY REPORT

MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Seasonally Adjusted Annual Rates, Units as Indicated)

	1981:3	1981:4	1982:1	1982:2	1982:3	1982:4
Employment—Total Nonag.*	2670	2664	2643	2626	2607	2613
% Change	-.6	-1.0	-3.1	-2.6	-2.9	1.1
Manufacturing*	669	667	656	646	629	617
% Change	-2.4	-1.2	-6.7	-5.9	-10.2	-7.3
Non-Manufacturing*	2001	1996	1987	1980	1978	1996
% Change	.0	-.9	-1.8	-1.6	-.4	3.8
Unemployment Rate	6.7	7.3	7.5	8.4	8.1	7.6
Employment Rate Index**	105.5	105.1	104.1	103.2	102.3	102.3
% Change	-1.7	-1.7	-3.8	-3.4	-3.6	.3
Relative to U.S. Index**	102.5	102.9	102.9	102.8	102.9	103.8
Rate of Wage Change	8.8	8.3	3.6	11.8	9.9	5.1
Wage Index Rel. to U.S.**	92.6	92.9	92.2	93.4	94.3	94.3
Avg. Weekly Hours in Mfg.	40.0	40.1	39.6	39.7	39.0	39.2
Rate of Price Inflation	8.9	6.1	-2.4	1.8	12.2	5.7
Relative to U.S. CPI**	96.4	96.0	94.8	94.0	95.0	95.8
Personal Income (mil\$)	65492	66725	66927	68354	69571	70801
% Change	15.3	7.7	1.2	8.8	7.3	7.3
Disposable Income (mil\$)	54066	55372	55579	56745	58173	59183
% Change	14.7	10.0	1.5	8.7	10.5	7.1
Real Per Cap. D.I. Index**	102.7	103.7	104.7	106.4	105.9	106.3
Relative to U.S.**	102.2	103.2	104.4	106.0	105.5	105.4
Rel. Business Cost Index**	95.1	95.1	94.8	95.3	95.7	95.9
Manufacturing**	94.4	94.1	94.3	94.6	95.1	95.6
Non-Manufacturing**	95.4	95.6	95.0	95.7	96.0	96.1

*Thousands of people.

**Indexes equal 100 in calendar 1973.

83/07/28

JULY CONTROL FORECAST (T4)

SUMMARY REPORT

MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Seasonally Adjusted Annual Rates, Units as Indicated)

	1983:1	1983:2	1983:3	1983:4	1984:1	1984:2
Employment--Total Nonag.*	2614	2606	2635	2659	2679	2696
% Change	.1	-1.3	4.6	3.7	3.1	2.4
Manufacturing*	609	611	618	624	629	631
% Change	-5.0	1.5	4.2	4.5	3.2	1.1
Non-Manufacturing*	2005	1994	2018	2035	2050	2064
% Change	1.7	-2.1	4.8	3.4	3.0	2.8
Unemployment Rate	7.8	6.8	7.5	7.1	6.8	6.7
Employment Rate Index**	102.1	101.6	102.6	103.4	103.9	104.4
% Change	-.7	-2.0	3.9	2.9	2.3	1.8
Relative to U.S. Index**	103.9	102.9	103.3	103.4	103.3	103.2
Rate of Wage Change	5.4	4.5	4.5	4.8	3.6	4.6
Wage Index Rel. to U.S.**	94.3	94.5	94.5	94.7	94.8	94.8
Avg. Weekly Hours in Mfg.	39.4	39.7	39.9	40.1	40.2	40.2
Rate of Price Inflation	2.0	1.3	5.0	4.7	5.0	4.7
Relative to U.S. CPI**	96.4	95.6	95.6	95.7	95.8	95.9
Personal Income (mil\$)	71716	72054	73965	75552	77085	78395
% Change	5.3	1.9	11.0	8.9	8.4	7.0
Disposable Income (mil\$)	60040	60302	62439	63824	65234	66205
% Change	5.9	1.8	14.9	9.2	9.1	6.1
Real Per Cap. D.I. Index**	107.3	107.2	109.5	110.5	111.4	111.7
Relative to U.S.**	105.4	104.5	105.2	105.2	105.0	104.8
Rel. Business Cost Index**	95.8	95.8	95.9	96.0	96.0	96.1
Manufacturing**	95.5	95.5	95.6	95.6	95.7	95.7
<u>Non-Manufacturing**</u>	95.9	96.0	96.0	96.1	96.2	96.2

*Thousands of people.

**Indexes equal 100 in calendar 1973.

83/07/28

JULY CONTROL FORECAST (T4)

EMPLOYMENT IN MASSACHUSETTS--INDUSTRY DETAIL
(Thousands of People, Seasonally Adjusted)

	1981:3	1981:4	1982:1	1982:2	1982:3	1982:4
Manufacturing	669.3	667.3	655.8	645.9	628.8	617.0
As % of U.S.	3.29	3.35	3.38	3.39	3.37	3.38
Durables	411.2	411.3	404.4	398.7	388.6	376.0
Lumber, Furntr. (24/25)	12.7	12.7	11.9	11.6	11.0	11.2
Stone, Clay, etc. (32)	12.8	12.9	12.2	12.1	11.5	11.1
Primary Metals (33)	17.2	17.2	16.6	15.9	14.9	14.1
Fabricated Metals (34)	51.8	50.8	49.7	48.2	46.1	45.1
Non-elec. Machin. (35)	110.7	109.1	107.2	105.0	104.6	101.3
Elec. Equipment (36)	113.0	113.9	113.2	113.9	111.2	108.5
Transport. Equip. (37)	30.8	33.3	32.1	31.4	31.6	28.4
Instruments (38)	62.3	61.4	61.5	60.6	57.7	56.3
Nondurables	258.1	256.0	251.4	247.2	240.2	241.0
Food (20)	25.3	25.5	24.8	24.2	24.5	25.3
Textiles (22)	23.5	23.1	22.1	21.3	19.8	20.5
Apparel (23)	39.4	39.0	38.3	38.4	35.2	37.4
Paper (26)	27.1	27.2	26.9	26.1	25.9	25.9
Printing (27)	44.8	45.7	46.4	45.8	45.2	44.4
Chemicals (28)	18.3	18.1	18.0	17.6	17.4	17.1
Rubber (30)	30.0	29.5	30.0	29.6	29.4	28.8
Leather (31)	21.2	20.8	19.2	19.3	18.3	17.8
Other Nondurables (39)	28.4	27.1	25.8	25.0	24.6	23.8
Nonmanufacturing	2001.1	1996.5	1987.4	1979.6	1977.8	1996.5
Contract Construction	77.8	81.1	83.7	77.4	75.6	77.4
Transport & Utilities	119.1	119.5	119.5	119.7	117.8	118.2
Wholesale & Retail Trade	587.2	573.8	572.3	570.7	571.9	565.4
Finance, Insurance, etc.	168.1	165.5	165.9	168.2	170.9	167.8
Services & Miscellaneous	663.4	678.2	680.3	677.5	677.2	694.7
Government	385.6	378.3	365.7	366.1	364.4	372.9
Federal	57.4	56.7	56.7	55.7	55.3	55.5
State	98.6	93.5	91.2	90.9	90.7	94.1
Local	229.5	228.1	217.8	219.5	218.3	223.3
Nonag. Wage & Sal. Employ.*	2670.4	2663.8	2643.2	2625.6	2606.6	2613.5
As % of U.S.	2.92	2.93	2.93	2.92	2.92	2.94

*Establishment basis (CES Survey).

83/07/28

JULY CONTROL FORECAST (T4)

EMPLOYMENT IN MASSACHUSETTS--INDUSTRY DETAIL
(Thousands of People, Seasonally Adjusted)

	1983:1	1983:2	1983:3	1983:4	1984:1	1984:2
Manufacturing	609.1	611.4	617.7	624.4	629.4	631.2
As % of U.S.	3.34	3.31	3.30	3.29	3.28	3.27
Durables	371.3	372.2	376.7	381.7	385.5	386.6
Lumber, Furntr. (24/25)	11.3	11.9	12.1	12.3	12.3	12.3
Stone, Clay, etc. (32)	10.3	10.5	10.7	10.8	10.9	10.9
Primary Metals (33)	14.3	14.3	14.8	15.2	15.6	16.1
Fabricated Metals (34)	44.4	43.6	44.0	44.4	44.7	44.9
Non-elec. Machin. (35)	98.2	96.5	97.4	99.1	100.6	100.9
Elec. Equipment (36)	106.9	108.2	110.0	111.5	112.4	112.0
Transport. Equip. (37)	30.2	31.9	32.1	32.3	32.4	32.6
Instruments (38)	55.8	55.3	55.6	56.1	56.5	56.9
Nondurables	237.8	239.2	241.0	242.8	244.0	244.6
Food (20)	24.8	24.3	24.3	24.4	24.4	24.4
Textiles (22)	20.9	20.9	20.9	21.0	21.1	21.0
Apparel (23)	36.1	37.3	37.4	37.5	37.6	37.6
Paper (26)	25.3	25.4	25.5	25.6	25.7	25.7
Printing (27)	44.7	43.8	44.1	44.4	44.5	44.7
Chemicals (28)	16.9	16.9	17.0	17.1	17.1	17.2
Rubber (30)	28.8	29.8	30.5	31.1	31.6	32.0
Leather (31)	17.4	17.2	17.1	17.1	17.0	17.0
Other Nondurables (39)	22.9	23.7	24.2	24.6	24.9	25.0
Nonmanufacturing	2005.1	1994.5	2017.8	2034.9	2050.0	2064.4
Contract Construction	79.7	70.6	72.3	74.3	76.3	78.2
Transport & Utilities	117.9	118.2	118.5	118.6	118.6	118.5
Wholesale & Retail Trade	571.1	570.0	574.1	576.2	578.6	581.3
Finance, Insurance, etc.	169.0	171.4	173.5	174.8	176.1	177.3
Services & Miscellaneous	701.8	698.9	711.7	721.8	729.1	736.4
Government	365.6	365.4	367.7	369.2	371.3	372.7
Federal	55.9	55.1	55.5	56.0	56.5	57.0
State	94.4	93.5	93.6	93.3	93.8	93.8
Local	215.3	216.8	218.6	219.9	221.0	221.9
Nonag. Wage & Sal. Employ.*	2614.2	2605.9	2635.5	2659.4	2679.5	2695.6
As % of U.S.	2.94	2.91	2.92	2.92	2.91	2.91

*Establishment basis (CES Survey).

83/07/28

JULY CONTROL FORECAST (T4)

MASSACHUSETTS EMPLOYMENT, POPULATION, AND LABOR FORCE
(Thousands of People, Seasonally Adjusted)

	1981:3	1981:4	1982:1	1982:2	1982:3	1982:4
Nonag. Wage & Sal. Employ.*	2670.4	2663.8	2643.2	2625.6	2606.6	2613.5
As % of U.S.	2.92	2.93	2.93	2.92	2.92	2.94
Plus: All Other Nonag.	165.7	165.7	166.1	171.3	175.8	175.0
Plus: Agriculture	26.4	26.4	25.5	26.3	25.5	25.5
Total Mass. Jobs	2862.4	2855.9	2834.8	2823.1	2808.0	2814.0
Less: Adjustments**	94.1	52.5	70.2	62.1	-5.4	46.7
Total Employment***	2768.3	2803.3	2764.7	2761.0	2813.3	2767.3
As % of U.S.	2.75	2.80	2.77	2.77	2.82	2.79
Mass. Population	5777.0	5778.0	5779.0	5780.0	5782.0	5783.0
As % of U.S.	2.51	2.51	2.50	2.49	2.49	2.48
Mass. Populn. 16 and Over	4447.0	4455.0	4463.3	4471.7	4480.0	4489.0
Mass. Employment Rate****	60.0	59.8	59.2	58.7	58.2	58.2
Indexed to 1973	105.5	105.1	104.1	103.2	102.3	102.3
U.S. Employment Rate	52.9	52.5	52.0	51.6	51.1	50.7
Mass. Index Rel. To U.S.	102.5	102.9	102.9	102.8	102.9	103.8
Labor Force	2966.7	3023.7	2988.7	3014.7	3061.0	2996.0
Participation Rate	66.7	67.9	67.0	67.4	68.3	66.7
U.S. Participation Rate	62.9	63.0	62.9	63.2	63.3	63.3
Number of Unemployed	198.3	220.3	224.0	253.7	247.7	228.7
Unemployment Rate	6.7	7.3	7.5	8.4	8.1	7.6
U.S. Unemployment Rate	7.4	8.3	8.8	9.4	10.0	10.7

*Establishment basis (CES Survey).

**Adjustments for double counting and place of residence.

***Household basis (Current Population Survey).

****Total nonag. employment divided by the population sixteen and over.

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JULY CONTROL FORECAST (T4)

MASSACHUSETTS EMPLOYMENT, POPULATION, AND LABOR FORCE
(Thousands of People, Seasonally Adjusted)

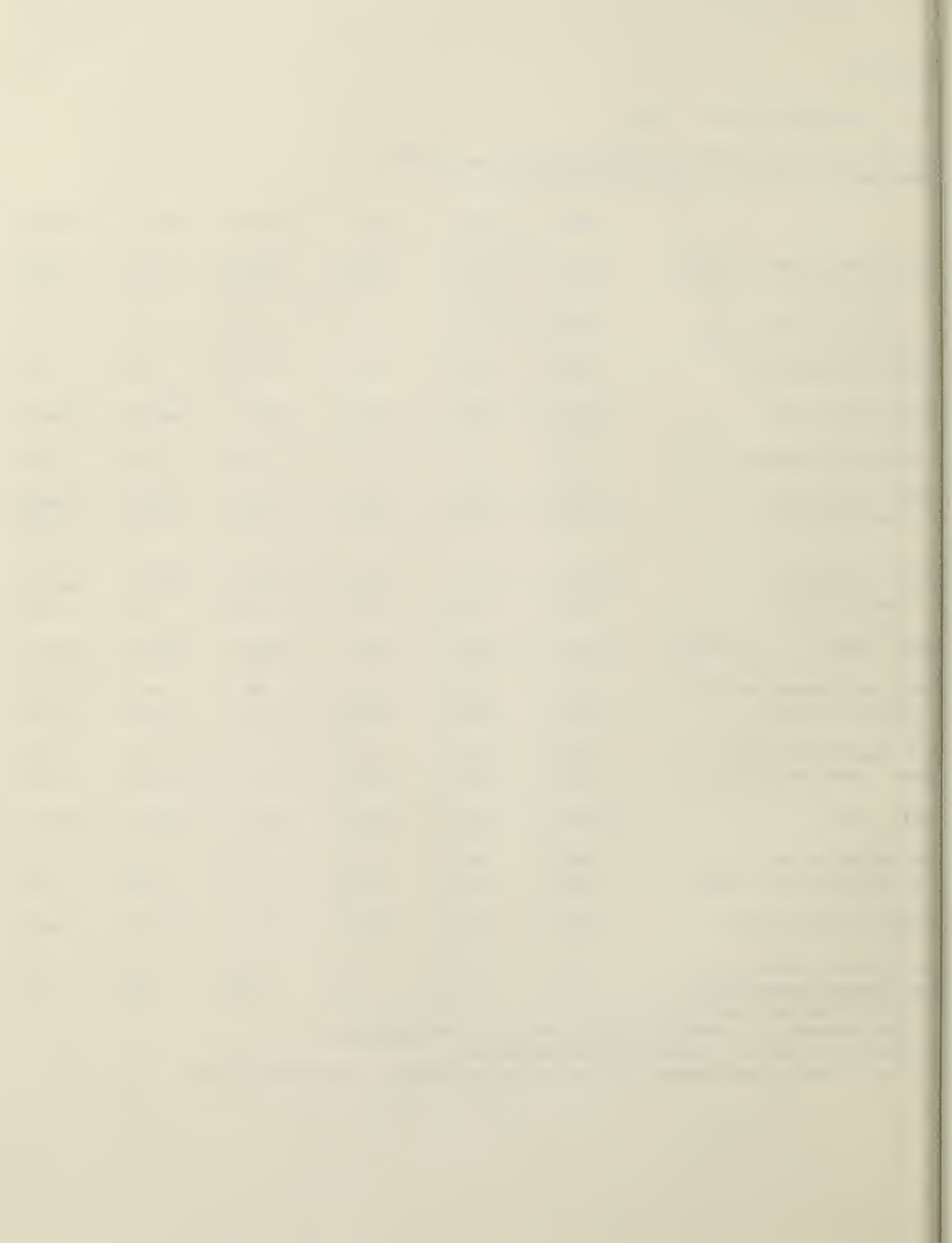
	1983:1	1983:2	1983:3	1983:4	1984:1	1984:2
Nonag. Wage & Sal. Employ.*	2614.2	2605.9	2635.5	2659.4	2679.5	2695.6
As % of U.S.	2.94	2.91	2.92	2.92	2.91	2.91
Plus: All Other Nonag.	174.5	175.0	177.3	179.1	180.6	181.8
Plus: Agriculture	24.7	24.7	24.7	24.7	24.7	24.7
Total Mass. Jobs	2813.4	2805.6	2837.5	2863.2	2884.8	2902.0
Less: Adjustments**	79.2	9.0	51.0	52.0	53.0	54.0
Total Employment***	2734.1	2796.5	2786.5	2811.2	2831.8	2848.0
As % of U.S.	2.76	2.80	2.77	2.77	2.76	2.76
Mass. Population	5785.1	5792.5	5800.7	5807.9	5817.5	5823.4
As % of U.S.	2.48	2.48	2.47	2.47	2.47	2.47
Mass. Populn. 16 and Over	4498.1	4506.3	4513.7	4522.0	4530.5	4537.8
Mass. Employment Rate****	58.1	57.8	58.4	58.8	59.1	59.4
Indexed to 1973	102.1	101.6	102.6	103.4	103.9	104.4
U.S. Employment Rate	50.5	50.8	51.1	51.4	51.7	52.0
Mass. Index Rel. To U.S.	103.9	102.9	103.3	103.4	103.3	103.2
Labor Force	2966.4	3000.0	3012.8	3026.1	3039.6	3052.2
Participation Rate	65.9	66.6	66.7	66.9	67.1	67.3
U.S. Participation Rate	62.9	62.9	63.1	63.3	63.4	63.6
Number of Unemployed	232.2	203.5	226.3	214.9	207.8	204.2
Unemployment Rate	7.8	6.8	7.5	7.1	6.8	6.7
<u>U.S. Unemployment Rate</u>	10.4	10.0	9.6	9.3	9.1	8.9

*Establishment basis (CES Survey).

**Adjustments for double counting and place of residence.

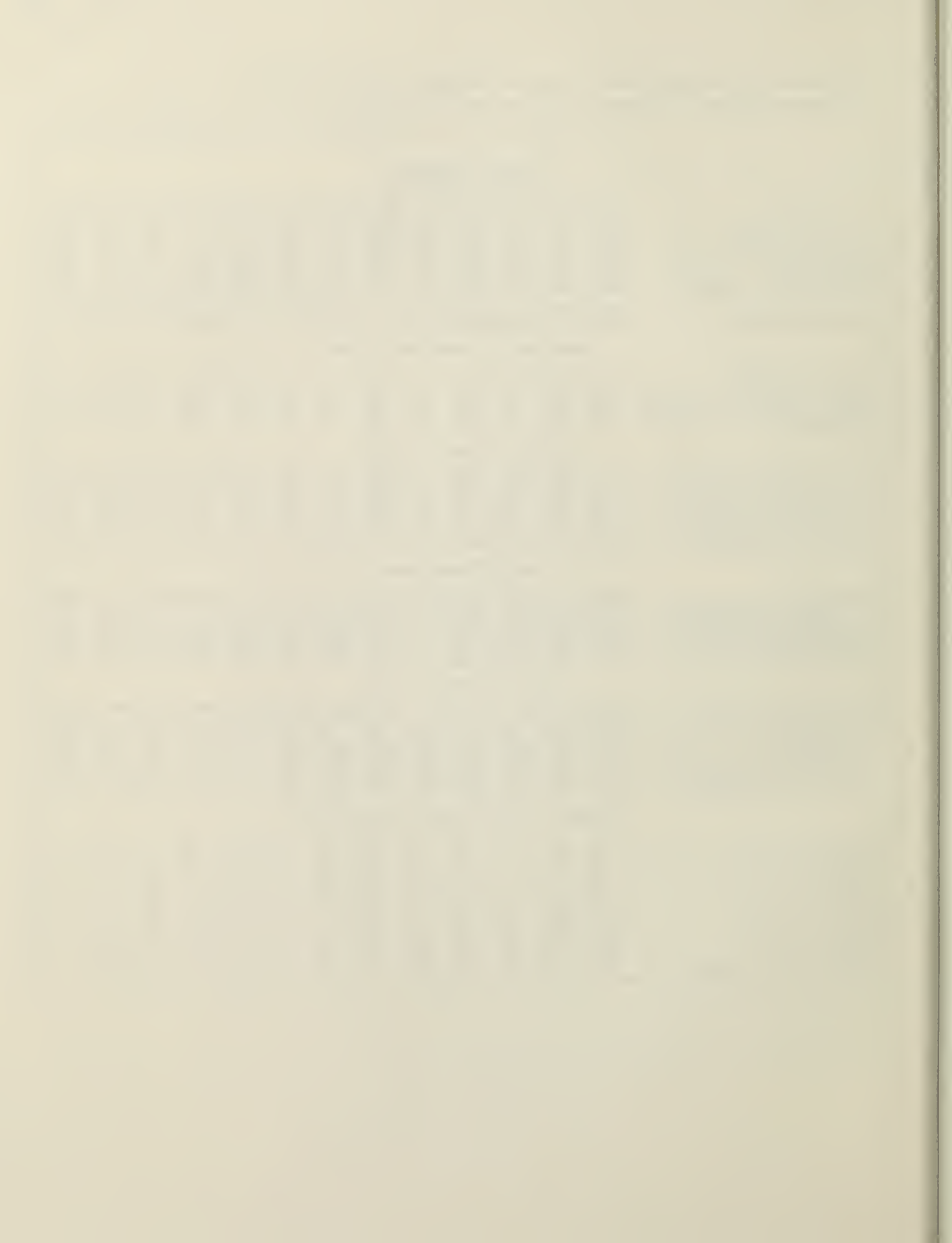
***Household basis (Current Population Survey).

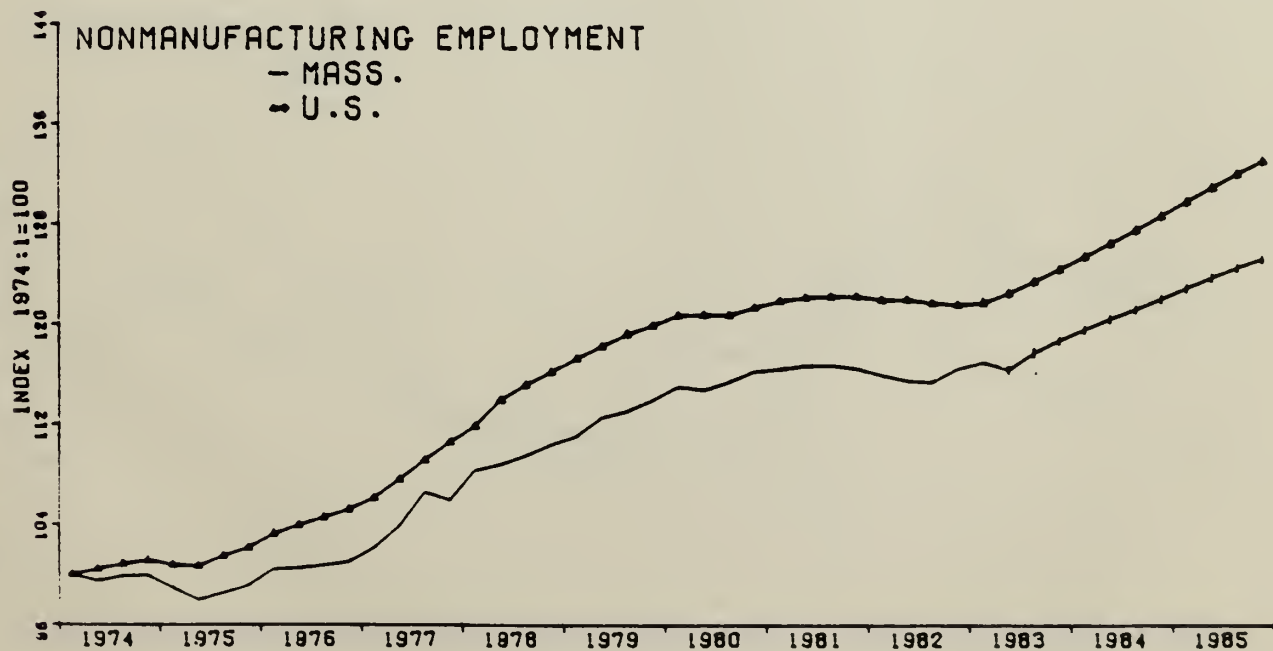
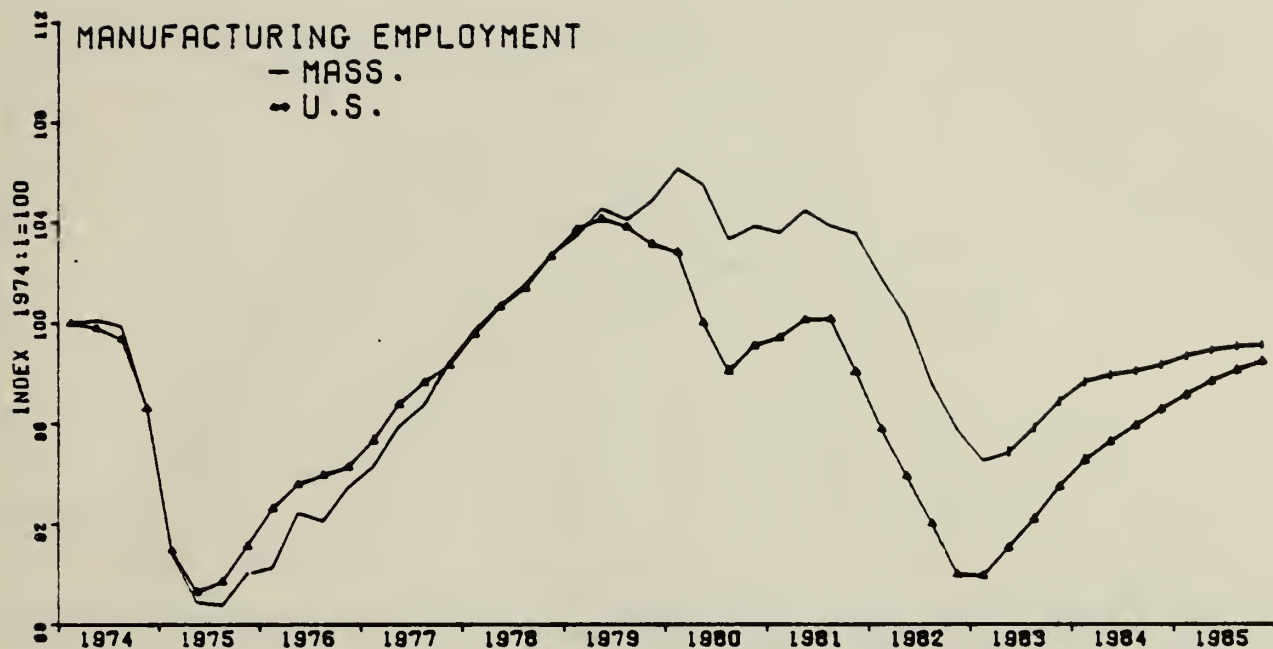
****Total nonag. employment divided by the population sixteen and over.

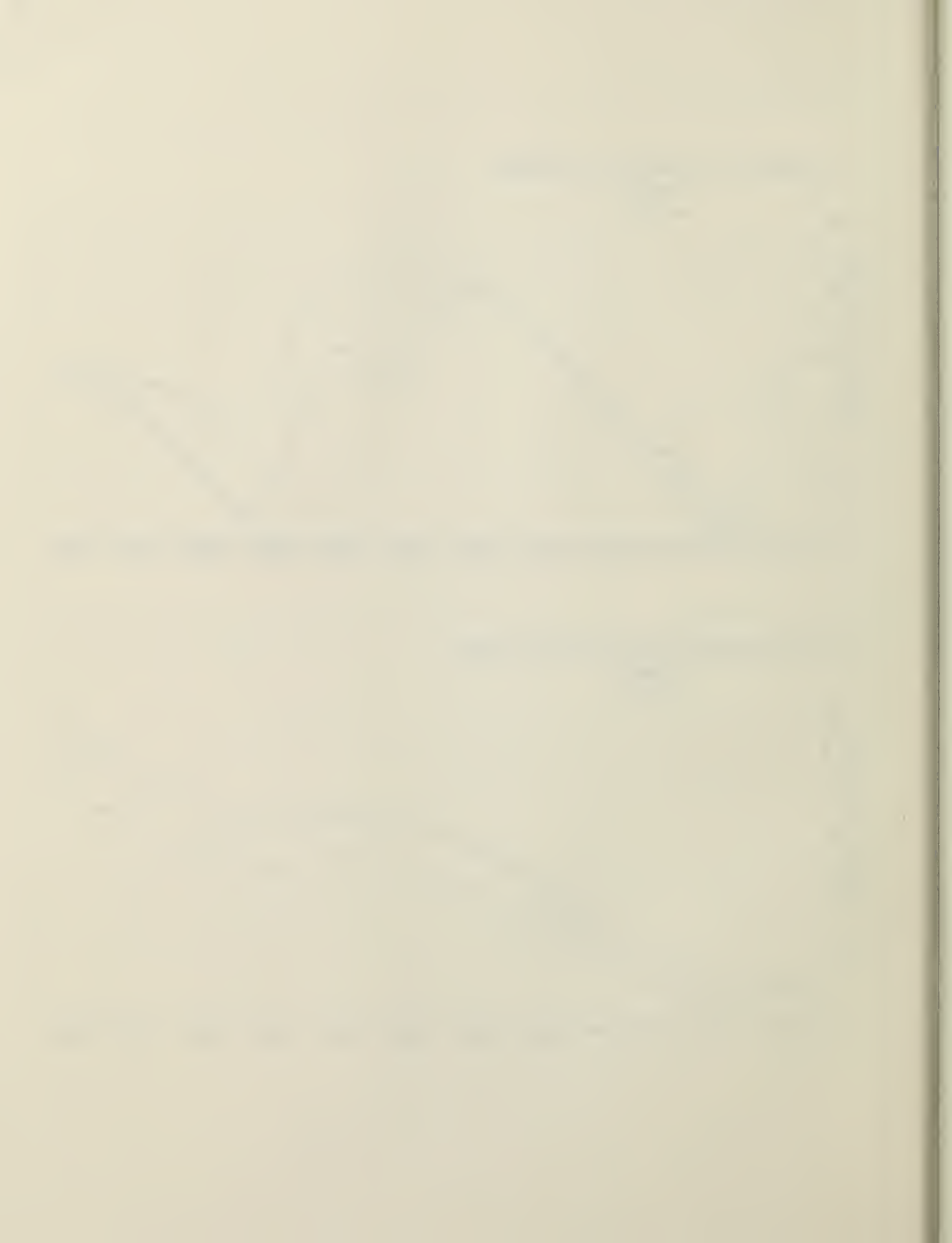


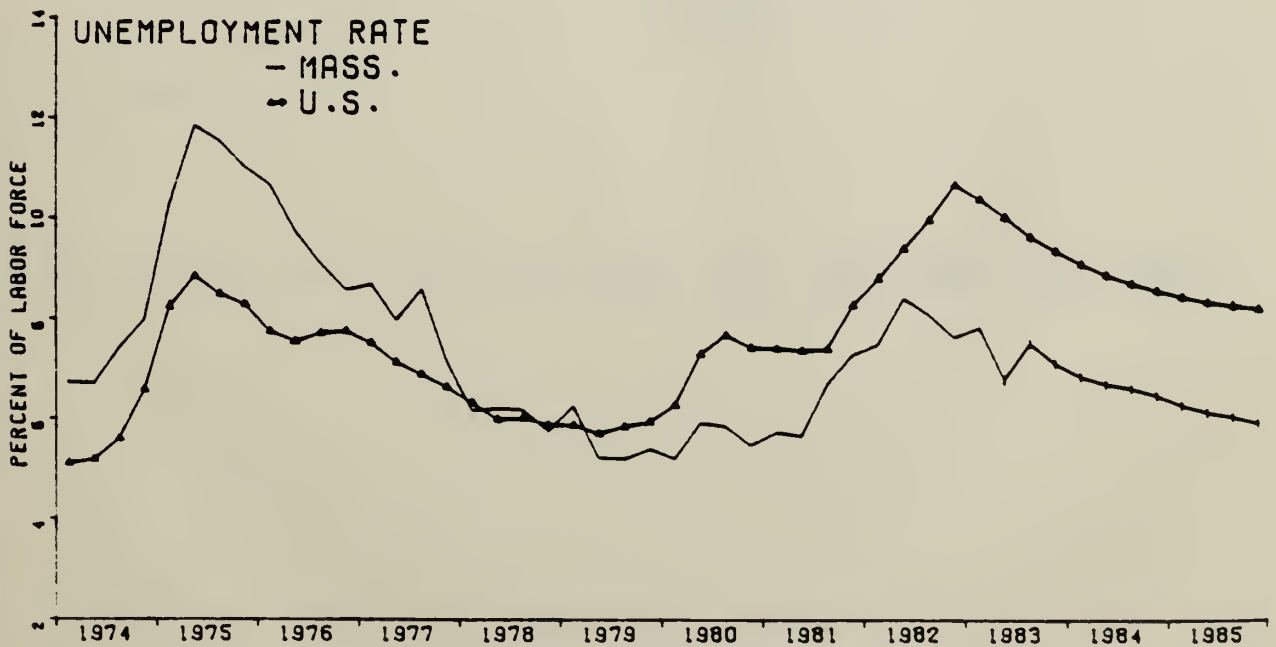
Data Resources Summary Table for the U.S. Economy - CONTROL062783

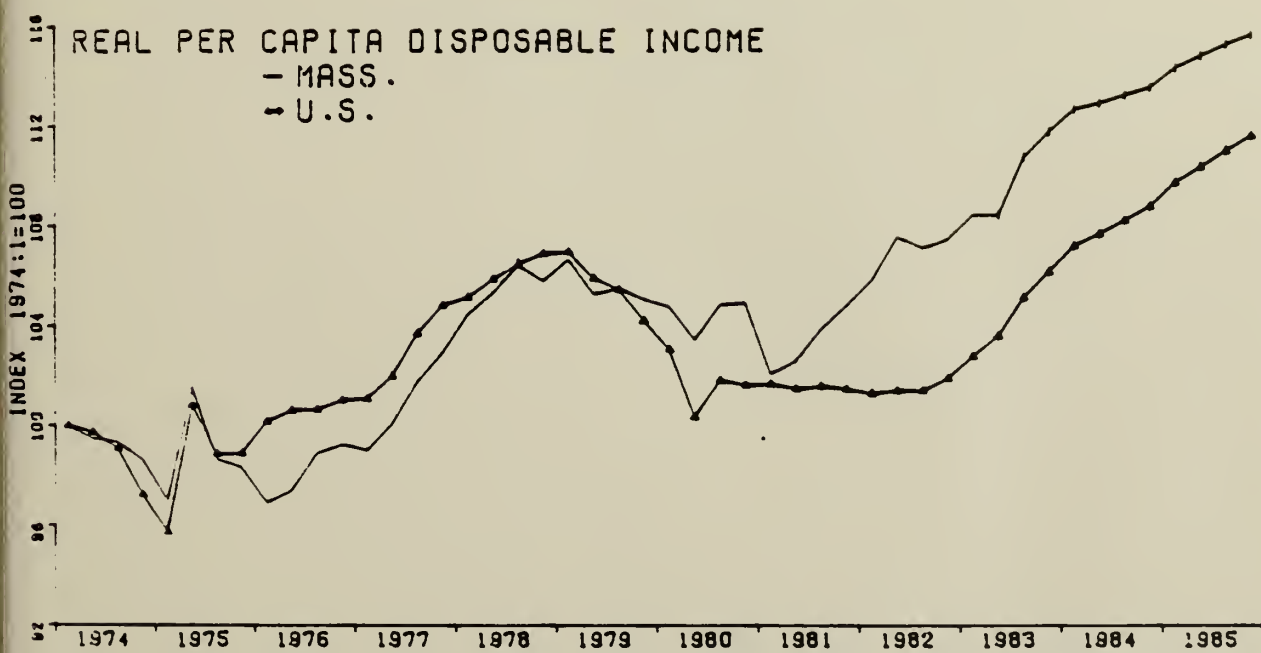
	1983				1984				Years				
	I	II	III	IV	I	II	III	IV	1981	1982	1983	1984	1985
GNP and Its Components Billions of Dollars - SAAR													
Total Consumption.....	2052.9	2105.7	2152.8	2197.7	2244.8	2288.4	2330.6	2373.1	1843.2	1971.1	2127.3	2309.2	2490.0
Nonres. Fixed Investment.....	337.1	337.8	341.1	346.9	354.7	363.0	371.5	380.6	346.1	348.0	340.7	367.4	406.4
Res. Fixed Investment.....	121.0	136.8	147.8	148.5	149.9	152.2	156.1	161.0	105.0	96.2	138.5	154.8	166.9
Inventory Investment.....	-36.3	-0.6	4.6	14.5	19.4	23.9	27.8	30.4	20.4	-23.9	-4.4	25.4	33.4
Net Exports.....	19.6	1.7	-5.3	-8.2	-9.1	-9.9	-9.9	-10.9	26.1	20.6	1.9	-10.0	-13.5
Federal Purchases.....	274.1	272.2	286.0	296.6	303.6	312.1	319.4	330.1	228.9	257.9	282.2	316.3	351.3
State and Local Govt. Purchases.....	402.2	406.0	411.1	415.9	421.1	427.5	434.5	441.6	368.0	389.4	408.8	431.2	462.6
Gross National Product.....	3170.6	3259.5	3338.2	3411.8	3484.3	3557.1	3630.1	3705.9	2937.7	3059.3	3295.0	3594.3	3897.0
Real GNP (1972 Dollars).....	1486.7	1511.4	1533.3	1551.3	1567.6	1584.0	1599.3	1614.3	1502.6	1476.8	1520.7	1591.3	1649.7
Prices and Wages - Annual Rates of Change													
Implicit Price Deflator.....	5.5	4.6	3.8	4.1	4.3	4.2	4.4	4.6	9.4	5.9	4.6	4.2	4.6
CPI - All Urban Consumers.....	-0.4	4.7	5.0	4.4	4.5	4.4	4.4	4.4	10.3	6.2	3.3	4.5	4.6
Producer Price Index - Finished Goods	-2.8	0.8	4.5	4.4	4.3	4.4	4.6	4.9	9.3	4.0	1.9	4.2	5.0
Compensation per Hour.....	6.0	4.8	4.4	4.9	6.4	5.3	5.4	5.3	9.7	7.3	5.5	5.4	5.7
Core Inflation.....	7.5	6.7	5.9	5.2	4.6	4.4	4.2	4.1	9.7	8.6	6.3	4.3	4.1
Production and Other Key Measures													
Industrial Production (1967=1.000)...	1.385	1.442	1.471	1.496	1.520	1.545	1.566	1.590	1.509	1.386	1.448	1.555	1.638
Annual Rate of Change.....	9.8	17.7	8.1	7.1	6.5	6.7	5.7	6.1	2.6	-8.1	4.5	7.4	5.3
Housing Starts (Mil. Units).....	1.694	1.690	1.720	1.686	1.671	1.695	1.743	1.782	1.100	1.059	1.698	1.723	1.711
Retail Unit Car Sales (Mil. Units)...	8.4	8.8	9.2	9.7	10.0	10.2	10.4	10.6	8.5	8.0	9.0	10.3	10.9
National Unemployment Rate (%).....	10.2	9.9	9.5	9.2	8.9	8.7	8.6	8.4	7.5	9.6	9.7	8.7	8.2
Federal Budget Surplus (NIA).....	-174.0	-157.6	-191.3	-195.8	-199.5	-197.9	-196.9	-199.1	-60.0	-149.6	-179.7	-198.4	-208.7
Money and Interest Rates													
Money Supply (M-2).....	2043.6	2101.0	2149.9	2204.6	2251.0	2304.4	2352.5	2404.7	1779.8	1944.7	2204.6	2404.7	2603.6
% Change, 4th-Qtr. to 4th-Qtr.....	12.4	13.6	13.1	13.4	10.1	9.7	9.4	9.1	9.4	9.3	13.4	9.1	8.3
New AA Corp. Utility Rate (%).....	12.23	11.85	11.79	11.53	11.37	11.20	11.18	11.20	16.25	15.13	11.85	11.24	11.33
New High-Grade Corp. Bond Rate (%)...	11.22	10.90	11.08	10.94	10.84	10.70	10.70	10.73	15.01	13.89	11.03	10.74	10.85
Federal Funds Rate (%).....	8.65	8.82	9.38	9.56	9.62	9.22	8.97	9.31	16.38	12.26	9.10	9.28	9.66
Prime Rate (%).....	10.88	10.50	11.00	11.46	11.60	11.13	10.95	10.84	18.87	14.86	10.96	11.13	11.26
Incomes - Billions of Dollars													
Personal Income.....	2648.2	2708.9	2767.6	2827.7	2889.7	2945.5	3004.3	3064.8	2415.8	2569.8	2738.1	2976.1	3226.8
Real Disposable Income (%Ch).....	2.2	3.6	8.0	5.2	5.4	3.0	3.3	3.4	2.5	1.1	3.0	4.7	3.7
Saving Rate (%).....	5.9	5.6	6.3	6.4	6.6	6.4	6.4	6.4	6.4	6.5	6.0	6.4	6.7
Profits Before Tax.....	177.9	196.6	206.5	215.5	225.1	235.5	245.7	256.9	232.1	174.9	199.1	240.8	279.9
Profits After Tax.....	112.7	127.0	135.3	140.3	146.3	154.4	160.0	166.4	150.9	117.2	128.8	156.8	182.4
Company Profits.....	85.9	98.8	110.3	114.3	118.1	122.2	126.1	131.6	107.3	91.4	102.3	124.5	144.7
Four-Qtr. Percent Change.....	-3.0	7.3	17.4	25.5	37.4	23.7	14.3	15.1	2.9	-14.8	11.9	21.7	16.3
Composition of Real GNP - Annual Rates of Change													
Gross National Product.....	2.6	6.8	5.9	4.8	4.3	4.2	3.9	3.8	1.9	-1.7	3.0	4.6	3.7
Final Sales.....	1.3	2.6	5.3	3.7	3.8	3.8	3.6	3.6	1.0	-0.5	2.5	3.8	3.5
Total Consumption.....	2.5	5.3	4.6	4.5	4.4	3.8	3.3	3.3	1.8	1.0	3.6	4.2	3.3
Nonres. Fixed Investment.....	3.8	1.2	2.2	4.2	5.8	5.8	5.6	5.8	3.5	-3.6	-1.3	4.7	6.0
Equipment.....	8.7	7.7	4.7	5.5	6.3	6.6	6.3	6.6	2.4	-6.4	0.7	6.1	6.7
Nonres. Construction.....	-5.5	-12.1	-3.3	1.2	4.7	3.9	4.1	4.1	6.3	2.9	-5.5	1.6	4.3
Res. Fixed Investment.....	81.6	50.8	29.3	-3.0	-1.1	1.5	5.5	7.9	-4.9	-10.2	37.7	6.3	2.4
Exports.....	0.3	-10.9	2.9	4.7	5.4	4.8	4.8	5.0	-0.5	-6.5	-7.6	3.6	5.4
Imports.....	9.6	8.8	5.4	6.9	7.0	5.4	5.0	5.1	7.2	-0.2	0.9	6.2	4.9
Federal Government.....	-20.1	-7.9	16.4	6.9	4.5	6.6	4.6	4.6	3.7	5.4	2.1	6.0	4.4
State and Local Governments.....	-0.5	-1.0	0.0	-0.2	0.1	1.1	1.5	1.1	-0.8	-1.0	-0.4	0.4	1.5











The April 1983

Massachusetts Economic Policy Analysis (MEPA)

Short-term Economic Forecast

and

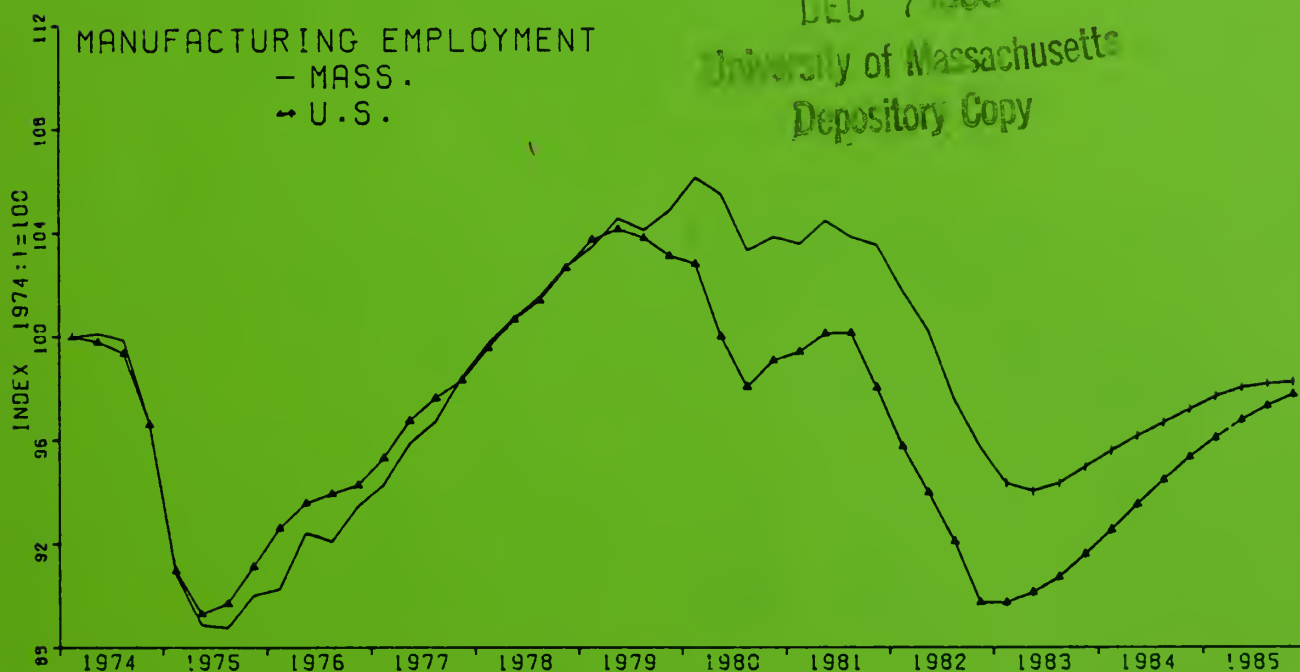
Tax Revenue Forecast

by

George Treyz, Roy Williams and Margaret Larson *

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*Director, Associate Director, and Research Assistant, respectively, of the MEPA project, Economics Department, University of Massachusetts, Amherst, MA 01003. (Tel. 413-545-0915). Technical assistance from Loren Lidsky, MEPA staff.

Support from the Department of Public Welfare, the Division of Employment Security, the Department of Commerce and Development, the Metropolitan District Commission, Massport, and the Massachusetts Development Research Institute. National inputs from CONTROL032783 from Data Resources, Inc.



The April 1983
Massachusetts Economic Policy Analysis (MEPA)
and
Revenue Analysis and Forecasting (MRAF)
Model Forecasts

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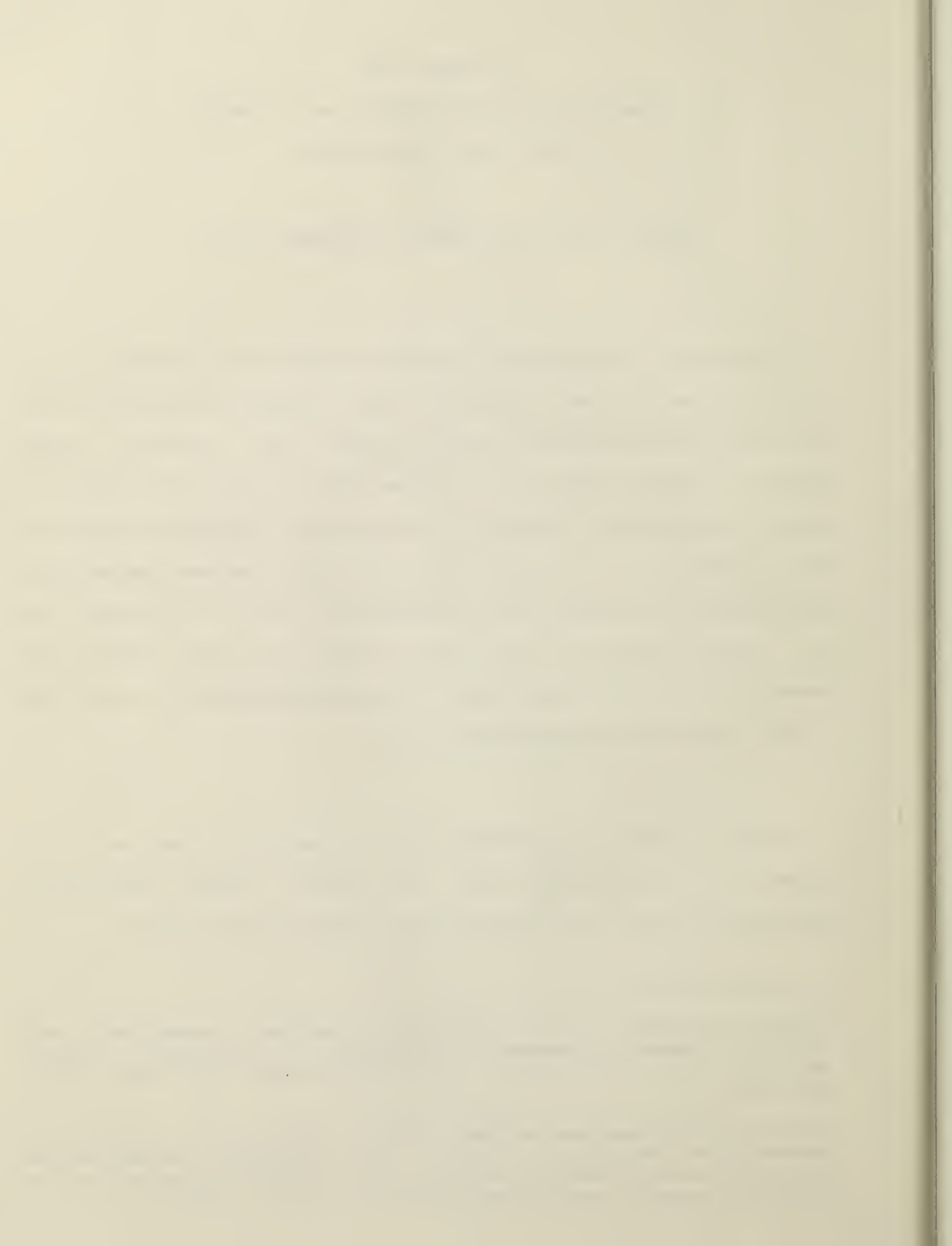
George Treyz, Roy Williams and Margaret Larson *

Employment in Massachusetts is currently projected to increase for the rest of the year with 1983 registering a slight employment increase over 1982. This forecast contrasts with our January forecast which projected a slight employment decline between 1982 and 1983. This is entirely the result of a much more optimistic U.S. forecast by Data Resources, Incorporated based on lower expected oil prices and higher projected investment expenditures. Recently revised employment data for Massachusetts shows 1981 employment was 14.1 thousand higher than previously reported, and 1982 employment in Massachusetts was 8.3 thousand higher. Thus the 1982 employment decline was slightly more severe than previously reported.

Employment levels in Massachusetts should climb for the next few years, although at a decelerating rate. The service, durable, and contract construction sectors will account for most of the employment growth.

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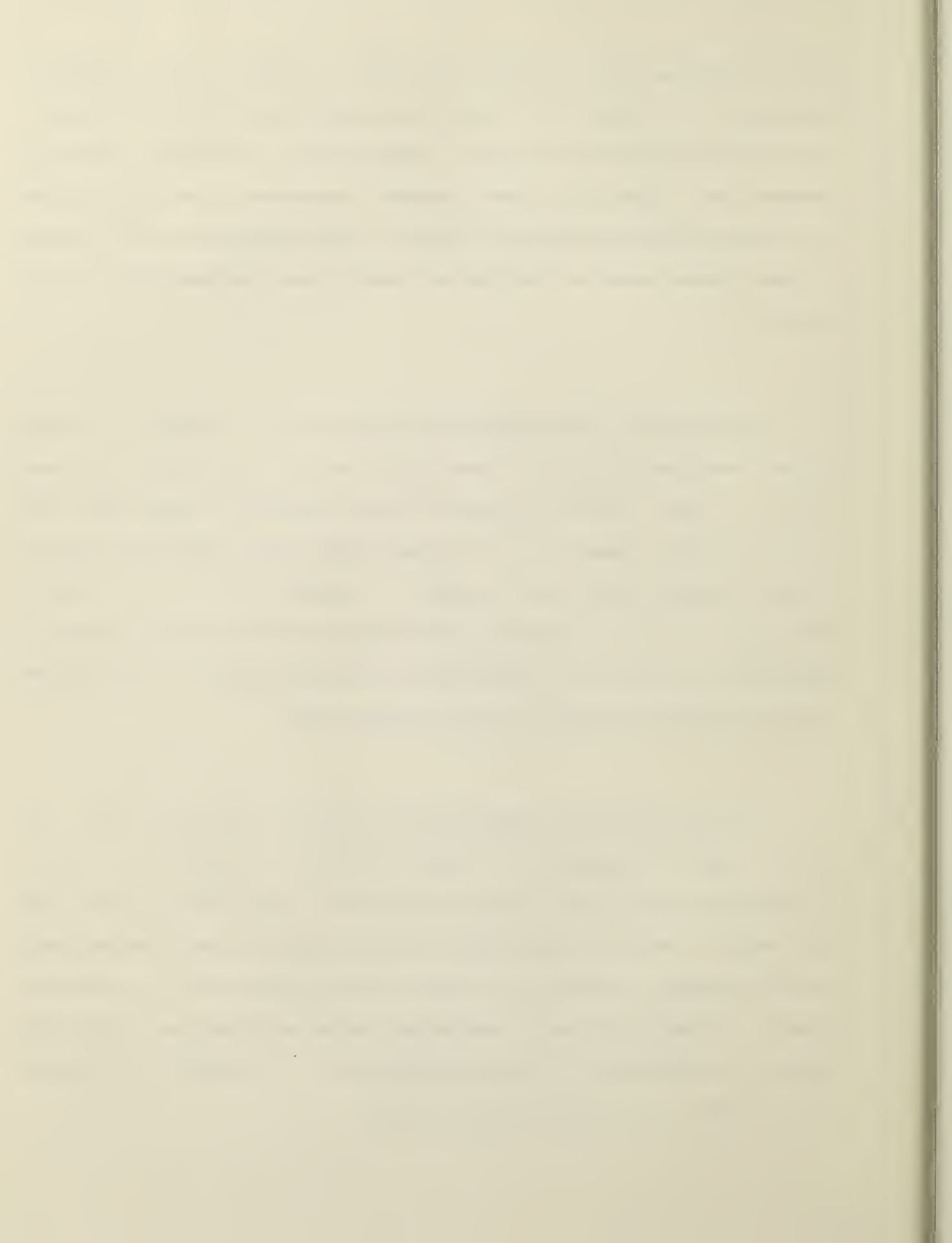
Support from the Department of Public Welfare, the Division of Employment Security, the Department of Commerce and Development, the Metropolitan District Commission, Massport, and the Massachusetts Development Research Institute. National inputs from CONTROL032783 from Data Resources, Inc.



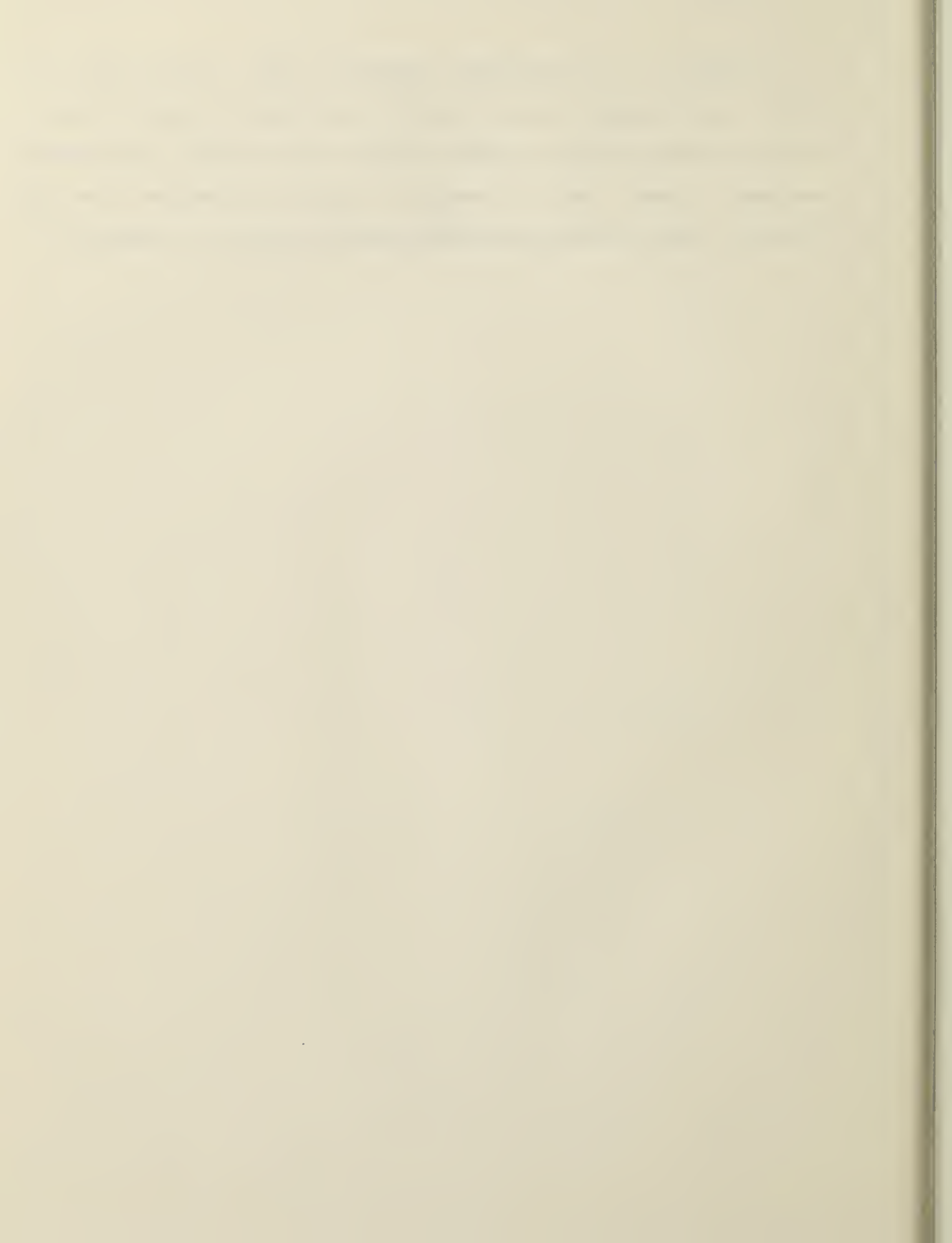
Durables employment will increase in 1984 and 1985 as U.S. investment accelerates in response to lower real interest rates, increased capacity utilization and the expanded use of investment tax incentives. However, despite the strong durable goods recovery, Massachusetts growth is expected to be less pronounced than that of the U.S. since Massachusetts has suffered a less severe recession, and thus has fewer economic setbacks from which to recover.

The Massachusetts labor force participation rate is assumed to remain higher than that of the U.S., gradually increasing in line with the increase in the U.S. rate. Since the increase in total employment is higher than the increase in the labor force, the unemployment rate is expected to decline steadily through 1985, after peaking at slightly over 8% in 1983:2. Improvement in the unemployment rate should lag behind general recovery as people who were previously "discouraged" become more optimistic about finding a job and therefore decide to rejoin the labor force.

Inflation has indeed subsided, but the near-zero figures for 1983:1 can not be expected to persist. CPI growth for Boston is forecast to rise to an annual rate of 5.5% by this autumn and remain near that level for the next two years. Despite a deceleration in wage increases, workers and consumers should be making a comeback for at least the next three years as employment levels increase and inflation remains well below the disastrous double-digit range of the recent past. Real per capita income is expected to increase 3.7% in 1983, 2.9% in 1984, and 1.4% in 1985.



It appears that Massachusetts production costs, particularly labor costs, are stabilizing relative to the U.S. after years of relative decline. Projected modest wage gains relative to the U.S. will moderate Massachusetts employment growth. This is forecast to produce a resumption in the long historical trend of decline in the Massachusetts share of U.S. employment.



APRIL CONTROL FORECAST (T4)

SUMMARY REPORT

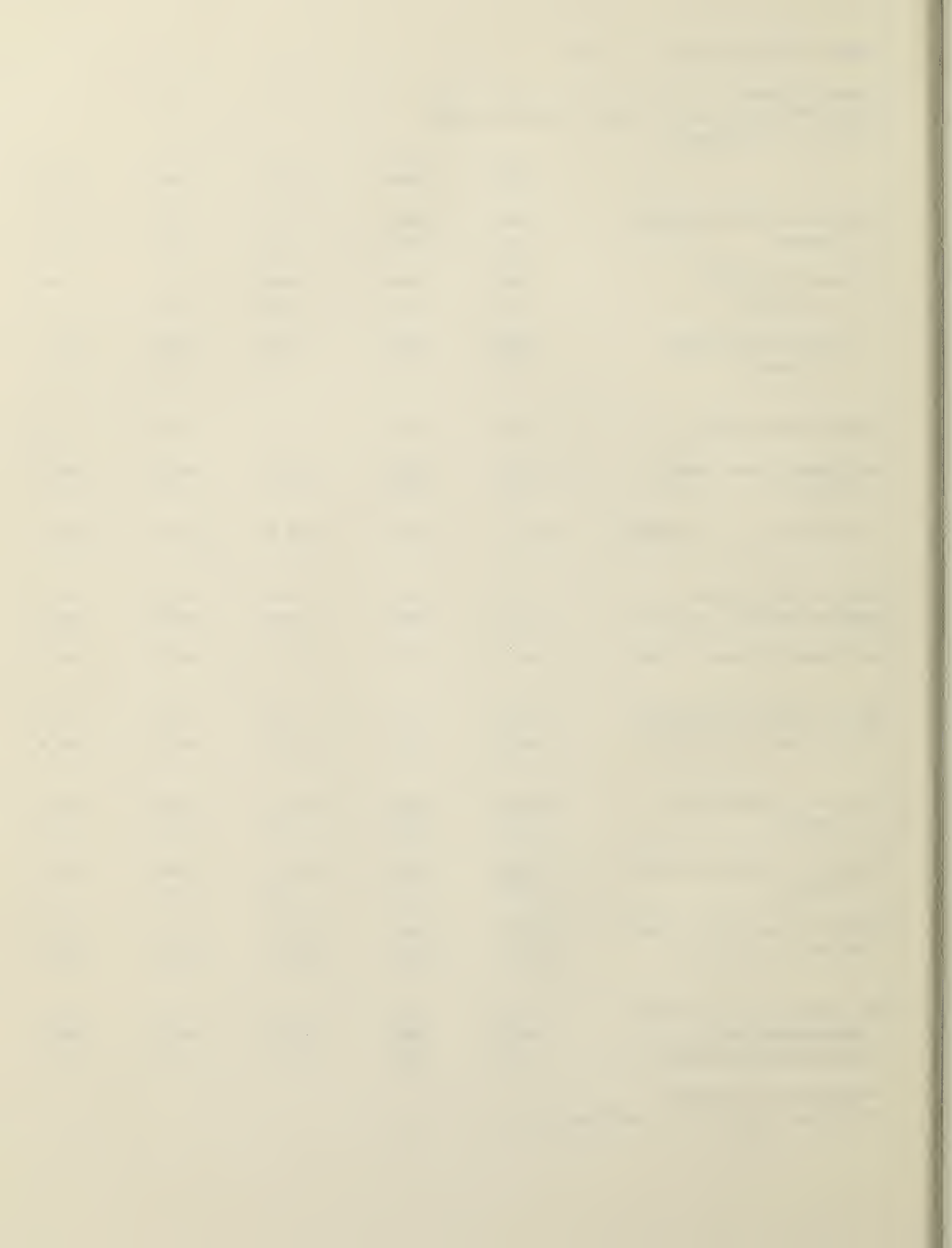
MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Units as Indicated)

	1981	1982	1983	1984	1985
Employment--Total Nonag.*	2668	2622	2631	2693	2747
% Change	.6	-1.7	.4	2.3	2.0
Manufacturing*	669	637	609	621	632
% Change	-.8	-4.9	-4.4	2.1	1.7
Non-Manufacturing*	1999	1985	2023	2071	2115
% Change	1.1	-.7	1.9	2.4	2.1
Unemployment Rate	6.3	7.9	7.9	7.2	6.4
Employment Rate Index**	105.6	103.0	102.5	104.3	105.8
% Change	-.6	-2.5	-.4	1.7	1.4
Relative to U.S. Index**	102.7	103.1	103.8	103.3	102.7
Rate of Wage Change	8.2	8.6	6.6	6.1	5.1
Wage Index Rel. to U.S.**	92.7	94.2	95.0	95.3	95.4
Avg. Weekly Hours in Mfg.	40.1	39.4	39.7	40.2	40.3
Rate of Price Inflation	11.1	4.2	4.2	5.5	5.7
Relative to U.S. CPI**	96.7	94.9	95.9	96.3	96.6
Personal Income (mil\$)	64248	69389	74592	81206	87557
% Change	11.3	8.0	7.5	8.9	7.8
Disposable Income (mil\$)	53180	57848	62721	68401	73642
% Change	10.5	8.8	8.4	9.1	7.7
Real Per Cap. D.I. Index**	102.2	106.6	110.6	113.7	115.4
Relative to U.S.**	101.7	106.1	107.1	106.4	105.4
Rel. Business Cost Index**	95.3	96.1	96.9	97.2	97.3
Manufacturing**	94.8	95.1	96.0	96.3	96.3
<u>Non-Manufacturing**</u>	95.6	96.5	97.4	97.6	97.7

*Thousands of people.

**Indexes equal 100 in calendar 1973.



APRIL CONTROL FORECAST (T4)

EMPLOYMENT IN MASSACHUSETTS--INDUSTRY DETAIL
(Thousands of People)

	1981	1982	1983	1984	1985
Manufacturing	669.4	636.9	608.7	621.5	632.0
As % of U.S.	3.32	3.38	3.31	3.26	3.21
Durables	411.6	391.9	372.1	383.3	393.7
Lumber, Furntr. (24/25)	13.0	11.4	11.2	11.2	11.2
Stone, Clay, etc. (32)	12.8	11.7	10.4	10.7	10.9
Primary Metals (33)	17.2	15.4	14.9	16.6	17.5
Fabricated Metals (34)	51.5	47.3	44.7	46.3	47.4
Non-elec. Machin. (35)	109.9	104.5	96.3	97.9	102.3
Elec. Equipment (36)	112.2	111.7	107.5	111.1	113.1
Transport. Equip. (37)	33.2	30.9	30.8	31.4	31.9
Instruments (38)	61.7	59.0	56.3	58.0	59.5
Nondurables	257.9	245.0	236.5	238.2	238.4
Food (20)	25.4	24.7	24.5	24.0	23.7
Textiles (22)	24.3	20.9	19.4	18.6	18.2
Apparel (23)	39.6	37.3	36.5	36.9	37.0
Paper (26)	27.2	26.2	25.1	25.3	25.2
Printing (27)	45.1	45.5	45.0	45.2	45.3
Chemicals (28)	18.4	17.5	16.9	17.1	17.2
Rubber (30)	29.5	29.4	29.0	30.6	31.4
Leather (31)	20.9	18.6	17.2	16.6	16.1
Other Nondurables (39)	27.5	24.8	23.0	23.9	24.1
Nonmanufacturing	1998.6	1985.3	2022.8	2071.5	2114.6
Contract Construction	79.7	78.5	83.7	92.1	97.8
Transport & Utilities	120.1	118.8	116.4	114.3	113.5
Wholesale & Retail Trade	579.0	570.1	575.5	588.1	597.5
Finance, Insurance, etc.	164.8	168.2	170.8	175.6	180.2
Services & Miscellaneous	664.2	682.4	708.6	726.3	743.9
Government	391.0	367.3	367.9	375.2	381.7
Federal	57.4	55.8	56.4	58.7	61.0
State	97.4	91.7	94.3	95.0	96.0
Local	236.2	219.7	217.2	221.5	224.7
Nonag. Wage & Sal. Employ.*	2668.0	2622.2	2631.5	2692.9	2746.6
As % of U.S.	2.93	2.93	2.93	2.91	2.87

*Establishment basis (CES Survey).

APRIL CONTROL FORECAST (T4)

MASSACHUSETTS EMPLOYMENT, POPULATION, AND LABOR FORCE
(Thousands of People)

	1981	1982	1983	1984	1985
Nonag. Wage & Sal. Employ.*	2668.0	2622.2	2631.5	2692.9	2746.6
As % of U.S.	2.93	2.93	2.93	2.91	2.87
Plus: All Other Nonag.	164.0	172.0	175.6	179.9	183.6
Plus: Agriculture	26.6	25.7	24.7	24.7	24.7
Total Mass. Jobs	2858.6	2820.0	2831.8	2897.5	2954.9
Less: Adjustments**	86.0	43.4	80.4	80.4	80.4
Total Employment***	2772.7	2776.6	2751.4	2817.1	2874.5
As % of U.S.	2.76	2.79	2.73	2.72	2.71
Mass. Population	5774.0	5781.0	5796.5	5824.7	5848.5
As % of U.S.	2.51	2.49	2.48	2.46	2.45
Mass. Populn. 16 and Over	4439.3	4476.0	4510.1	4539.1	4564.4
Mass. Employment Rate****	60.1	58.6	58.3	59.3	60.2
Indexed to 1973	105.6	103.0	102.5	104.3	105.8
U.S. Employment Rate	52.9	51.4	50.8	51.9	53.0
Mass. Index Rel. To U.S.	102.7	103.1	103.8	103.3	102.7
Labor Force	2960.8	3015.1	2988.6	3034.4	3071.0
Participation Rate	66.7	67.4	66.3	66.9	67.3
U.S. Participation Rate	63.1	63.2	63.4	63.9	64.3
Number of Unemployed	188.1	238.5	237.2	217.2	196.4
Unemployment Rate	6.3	7.9	7.9	7.2	6.4
<u>U.S. Unemployment Rate</u>	<u>7.6</u>	<u>9.7</u>	<u>10.0</u>	<u>9.1</u>	<u>8.5</u>

*Establishment basis (CES Survey).

**Adjustments for double counting and place of residence.

***Household basis (Current Population Survey).

****Total nonag. employment divided by the population sixteen and over.

APRIL CONTROL FORECAST (T4)

MANUFACTURING EMPLOYMENT IN MASSACHUSETTS
(Thousands of People)

	1981	1982	1983	1984	1985
Manufacturing	669.4	636.9	608.7	621.5	632.0
As % of U.S.	3.32	3.38	3.31	3.26	3.21
Durables	411.6	391.9	372.1	383.3	393.7
Lumber, Furniture (24/25)	13.0	11.4	11.2	11.2	11.2
Stone, Clay, Glass (32)	12.8	11.7	10.4	10.7	10.9
Primary Metals (33)	17.2	15.4	14.9	16.6	17.5
Fabricated Metals (34)	51.5	47.3	44.7	46.3	47.4
Non-elec. Machin. (35)	109.9	104.5	96.3	97.9	102.3
Engines & Turbines (351)	6.4	6.0	5.4	5.9	6.5
Metalworking Mach. (354)	17.2	15.0	12.0	12.0	12.4
Spec. Industry M. (355)	16.3	14.4	12.6	12.4	12.5
Gen. Industrial M. (356)	9.0	8.3	7.4	7.6	8.0
Off. & Comput. M. (357)	48.8	49.9	49.2	49.8	51.9
Rest of Industry	12.1	10.9	9.6	10.2	10.9
Elec. Equipment (36)	112.2	111.7	107.5	111.1	113.1
Electronic Compon. (367)	50.6	52.1	51.3	54.5	56.6
Rest of Industry	61.6	59.6	56.2	56.6	56.5
Transport. Equip. (37)	33.2	30.9	30.8	31.4	31.9
Mot. Vehicles & P. (371)	5.7	4.6	5.3	5.7	5.8
Aircraft & Parts (372)	10.3	9.7	9.3	9.2	9.4
Rest of Industry	17.2	16.5	16.2	16.5	16.7
Instruments (38)	61.7	59.0	56.3	58.0	59.5
Meas. & Control (382)	23.2	22.3	21.5	22.3	23.2
Rest of Industry	38.6	36.7	34.8	35.7	36.3
Nondurables	257.9	245.0	236.5	238.2	238.4
Food (20)	25.4	24.7	24.5	24.0	23.7
Textiles (22)	24.3	20.9	19.4	18.6	18.2
Apparel (23)	39.6	37.3	36.5	36.9	37.0
Paper (26)	27.2	26.2	25.1	25.3	25.2
Printing (27)	45.1	45.5	45.0	45.2	45.3
Chemicals (28)	18.4	17.5	16.9	17.1	17.2
Synthet. Materials (282)	5.5	5.0	4.8	5.0	5.1
Rest of Industry	12.8	12.5	12.1	12.1	12.1
Rubber (30)	29.5	29.4	29.0	30.6	31.4
Leather (31)	20.9	18.6	17.2	16.6	16.1
Other Nondurables (39)	27.5	24.8	23.0	23.9	24.1

APRIL CONTROL FORECAST (T4)

EMPLOYMENT IN MASSACHUSETTS AS A PER CENT OF U.S. EMPLOYMENT

	1981	1982	1983	1984	1985
Durables	3.40	3.53	3.47	3.40	3.34
Lumber (24)	.79	.75	.73	.71	.69
Furniture (25)	1.65	1.54	1.46	1.42	1.39
Stone, Clay, Glass (32)	2.01	2.03	1.85	1.81	1.76
Primary Metals (33)	1.54	1.67	1.74	1.73	1.71
Fabricated Metals (34)	3.23	3.28	3.21	3.14	3.06
Non-elec. Machin. (35)	4.38	4.58	4.69	4.51	4.35
Engines & Turbines (351)	4.78	5.26	5.51	5.42	5.31
Metalworking Mach. (354)	4.73	4.69	4.24	4.01	3.79
Spec. Industry M. (355)	8.18	8.02	7.67	7.22	6.80
Gen. Industrial M. (356)	2.81	2.93	3.01	2.94	2.86
Off. & Comput. M. (357)	10.53	10.22	10.06	9.93	9.78
Rest of Industry Group	1.18	1.22	1.25	1.23	1.21
Elec. Equipment (36)	5.36	5.55	5.44	5.41	5.32
Electronic Compon. (367)	9.04	9.16	8.88	8.84	8.74
Rest of Industry Group	4.02	4.13	4.02	3.94	3.83
Transport. Equip. (37)	1.76	1.79	1.79	1.74	1.72
Mot. Vehicles & P. (371)	.73	.69	.71	.71	.71
Aircraft & Parts (372)	1.59	1.58	1.66	1.65	1.64
Rest of Industry Group	3.74	3.81	3.89	3.74	3.63
Instruments (38)	8.49	8.37	8.27	8.46	8.50
Meas. & Control (382)	9.00	9.14	9.14	9.43	9.56
Rest of Industry Group	8.22	7.96	7.81	7.94	7.94
Nondurables	3.20	3.17	3.09	3.06	3.01
Food (20)	1.52	1.50	1.51	1.48	1.46
Textiles (22)	2.95	2.79	2.63	2.53	2.43
Apparel (23)	3.18	3.22	3.16	3.11	3.05
Paper (26)	3.96	3.97	3.82	3.74	3.66
Printing (27)	3.56	3.58	3.53	3.49	3.45
Chemicals (28)	1.66	1.63	1.60	1.59	1.58
Synthet. Materials (282)	2.84	2.73	2.68	2.66	2.63
Rest of Industry Group	1.41	1.40	1.38	1.37	1.35
Rubber (30)	4.01	4.21	4.18	4.19	4.20
Leather (31)	8.96	8.87	8.57	8.30	8.11
Other Nondurables (39)	6.69	6.40	6.02	5.99	5.95
Nonmanufacturing	2.86	2.85	2.88	2.86	2.83
Contract Construction	1.91	2.01	2.10	2.12	2.11
Transport & Utilities	2.33	2.35	2.37	2.33	2.29
Wholesale & Retail Trade	2.82	2.77	2.78	2.75	2.70
Finance, Insurance, etc.	3.11	3.14	3.12	3.08	3.03
Services & Miscellaneous	3.57	3.59	3.66	3.63	3.58
Government	2.44	2.33	2.32	2.33	2.33
Federal	2.07	2.04	2.03	2.03	2.03
State & Local	2.52	2.39	2.39	2.39	2.39

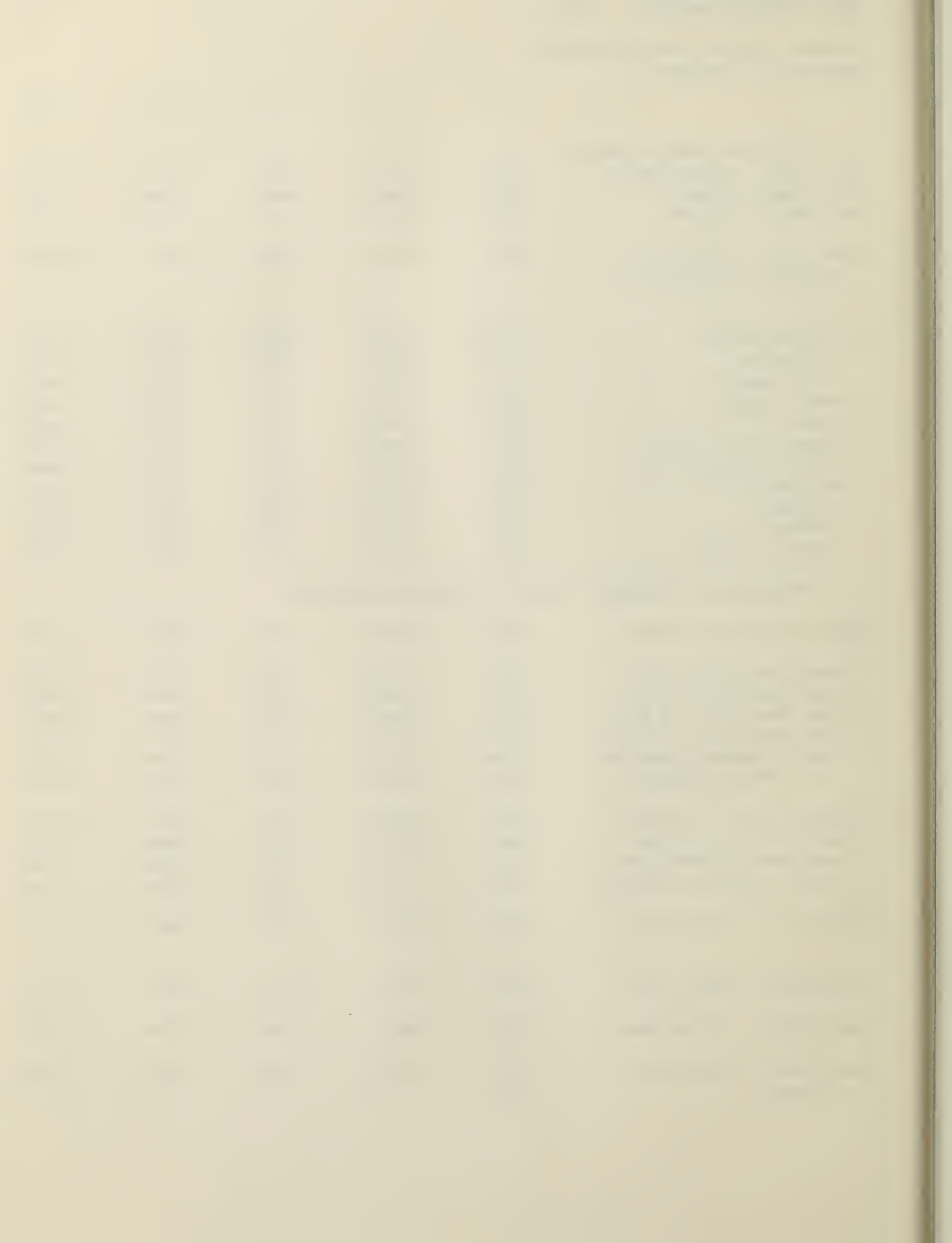
APRIL CONTROL FORECAST (T4)

PERSONAL INCOME IN MASSACHUSETTS
(Millions of Dollars)

	1981	1982	1983	1984	1985
INCOME BY PLACE OF WORK					
Wage & Sal. Disbursements	40435	43057	46089	50212	53924
Other Labor Income	3823	4301	4687	5146	5536
Proprietors' Income	2468	2570	3012	3298	3477
Total Labor & Propr. Inc.	46726	49928	53788	58656	62936
Breakdown by Industry:					
Farm	117	108	106	115	121
Manufacturing	13834	14338	14998	16455	17678
Durables	9791	10178	10598	11692	12648
Nondurables	4043	4161	4400	4764	5031
Construction	1820	2155	2519	2916	3232
Trade	7320	7644	8207	8908	9507
Finance, Ins., & R.E.	3059	3402	3688	4026	4341
Transportation & Util.	3027	3285	3482	3661	3839
Services & Misc.	10978	12308	13770	14999	16100
Government	6572	6687	7018	7575	8116
Federal	1607	1678	1781	1923	2089
State & Local	4965	5009	5236	5652	6028

DERIVATION OF PERSONAL INCOME BY PLACE OF RESIDENCE

Total L&P, Place of Work	46726	49928	53788	58656	62936
Less: Soc. Insr. Contr.	2662	2912	3152	3604	3998
Plus: Residence Adjmt.	-312	-351	-382	-410	-438
Plus: Div., Int., & Rent	11073	12389	12932	14464	16218
Plus: Transfer Payments	9424	10335	11406	12100	12838
State Unempl. Benefits	354	472	513	498	474
All Other Transfers	9070	9864	10892	11601	12364
Personal Inc., Pl of Res.	64248	69389	74592	81206	87557
Less: Fed. Income Tax	8011	8190	8270	8829	9590
Less: Mass. Income Tax	2221	2425	2590	2869	3126
Less: Other Mass. Taxes	836	926	1011	1108	1199
Dispos. P.I., Pl of Res.	53180	57848	62721	68401	73642
Boston CPI, 1967 = 100	266.6	277.7	289.5	305.5	322.9
Real D.P.I., '67 Dollars	19946	20825	21658	22389	22804
Real D.P.I., Per Capita	3.454	3.602	3.736	3.844	3.899
% Change	-1.1	4.3	3.7	2.9	1.4



APRIL CONTROL FORECAST (T4)

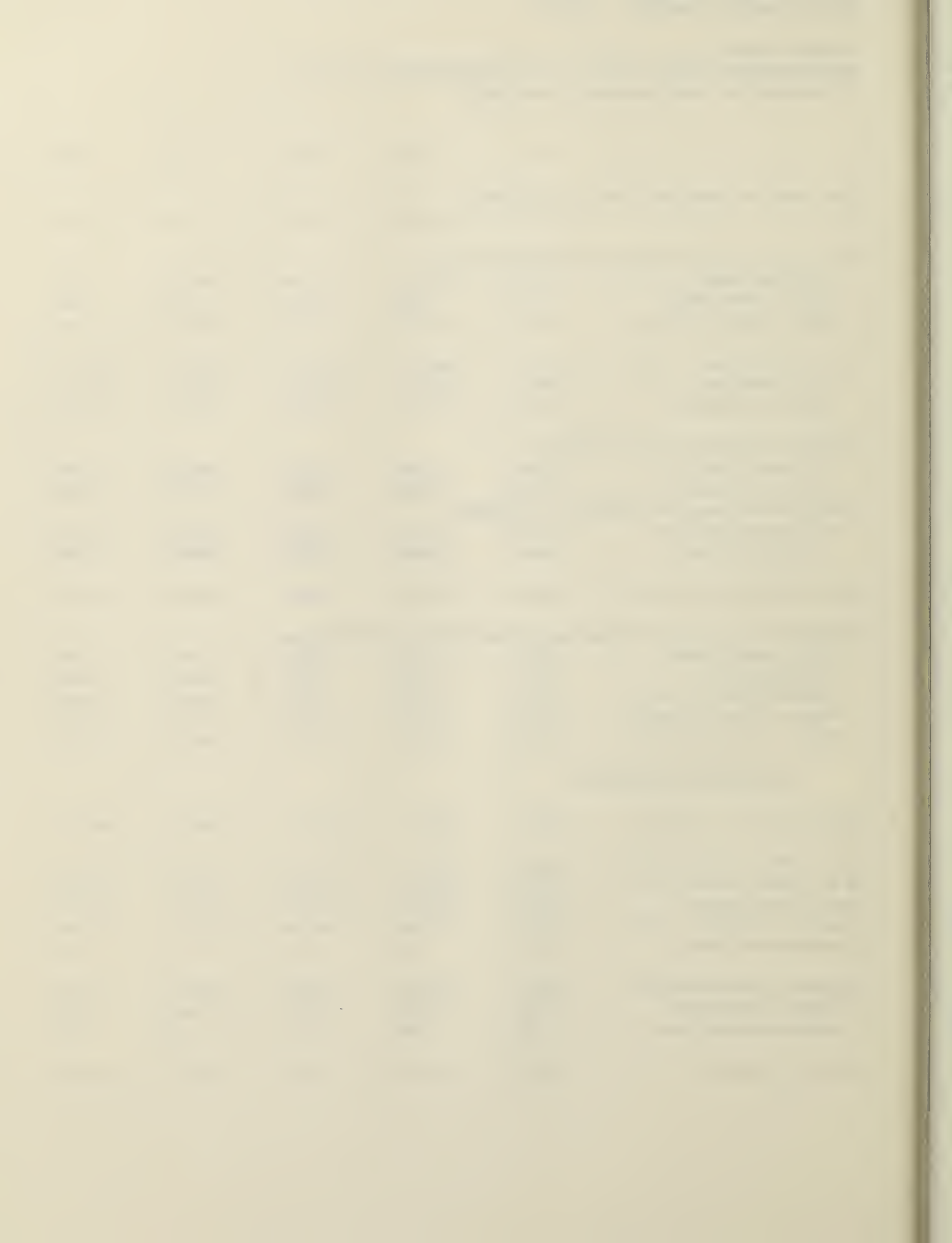
SUMMARY REPORT

MASSACHUSETTS EARNED FAMILY INCOME DISTRIBUTION MODEL
OF ANNUALIZED WORKING-PERIOD EARNINGS

	1981	1982	1983	1984	1985
Per Cent of Families with Female Head					
	18.15	18.79	19.43	20.06	20.69
Per Cent of Named Group without Earnings					
All Families	9.57	10.27	10.34	10.05	9.76
Male Headed Fams.	5.02	5.40	5.41	5.23	5.04
Female Headed Fams.	30.08	31.28	30.77	29.24	27.86
No. of Families (000)					
With Earnings	1208.2	1203.6	1198.6	1194.5	1187.8
Without Earnings	1092.6	1080.1	1074.7	1074.5	1071.9
	115.6	123.6	123.9	120.0	115.9
Average Earnings of All Families					
In Nominal Dollars	30266	32350	34773	38015	41055
In 1972 Dollars	14429	14804	15261	15814	16158
Average Earnings of Those with Earnings					
In Nominal Dollars	33470	36052	38781	42261	45495
In 1972 Dollars	15956	16498	17021	17581	17905
Total Earnings (mil \$)	36566	38937	41679	45408	48764
Displaced Log-Normal Parameters (Families with Earnings)					
Gini Coefficient	.3279	.3328	.3412	.3428	.3440
Displacement	.5197	.6082	.6098	.5669	.5234
Standard Deviation	.3866	.3702	.3793	.3918	.4048
Mean -- Nom. \$ Dist.	10.76	10.90	10.97	11.02	11.06
Mean -- 1972 \$ Dist.	10.02	10.12	10.15	10.15	10.13

EXPLANATORY VARIABLES

Population 18 thru 64	3583.7	3602.4	3619.9	3640.4	3653.5
Tot. Nonag. Employment	2668.0	2622.2	2631.5	2692.9	2746.6
M & R Emp. (% of Tot.)	29.59	28.82	27.55	27.32	27.14
Female Employment	1112.7	1104.8	1115.9	1140.5	1162.4
As % of Popul. 18-64	31.05	30.67	30.83	31.33	31.82
Unemployment Rate	6.3	7.9	7.9	7.2	6.4
Wage/Sal Disbursements	40435	43057	46089	50212	53924
WSD per Employee	15.155	16.422	17.513	18.644	19.631
Wage Acceleration	NA	NA	NA	NA	NA
C.P.I. (Boston)	266.6	277.7	289.5	305.5	322.9



APRIL CONTROL FORECAST (T4)

PER CENT OF MASSACHUSETTS FAMILIES
 WITH EARNED FAMILY INCOME IN GIVEN NOMINAL DOLLAR CLASSES
 (MEFID MODEL OF ANNUALIZED WORKING-PERIOD EARNINGS)

	1981	1982	1983	1984	1985
EARNINGS CLASS: (Nominal Dollars)					
\$0	9.57	10.27	10.34	10.05	9.76
1 and over	90.43	89.73	89.66	89.95	90.24
\$1 - 999	.66	.91	1.07	.98	.88
1000 - 1999	.30	.32	.33	.29	.26
2000 - 2999	.38	.39	.39	.35	.31
3000 - 3999	.48	.47	.47	.41	.36
4000 - 4999	.59	.56	.54	.47	.42
5000 - 5999	.71	.65	.62	.54	.48
6000 - 6999	.83	.75	.70	.61	.54
7000 - 7999	.95	.85	.79	.68	.60
8000 - 8999	1.08	.95	.87	.76	.67
9000 - 9999	1.21	1.05	.95	.83	.73
10000 - 10999	1.33	1.14	1.04	.90	.80
11000 - 11999	1.45	1.24	1.12	.97	.86
12000 - 12999	1.56	1.33	1.19	1.04	.93
13000 - 13999	1.66	1.42	1.27	1.11	.99
14000 - 14999	1.75	1.50	1.34	1.17	1.05
15000 - 19999	9.82	8.47	7.56	6.69	6.02
20000 - 24999	10.60	9.41	8.47	7.65	6.99
25000 - 34999	19.50	18.34	17.04	15.95	14.98
35000 - 49999	19.42	20.15	20.08	20.12	19.88
50000 and over	16.15	19.86	23.83	28.44	32.49
20000 and over	65.67	67.75	69.42	72.16	74.34
\$0 - 1000	10.23	11.17	11.40	11.03	10.64
0 - 2000	10.53	11.49	11.73	11.32	10.90
0 - 4000	11.40	12.36	12.59	12.07	11.57
0 - 6000	12.70	13.57	13.75	13.08	12.46
0 - 9000	15.56	16.11	16.11	15.13	14.28
0 - 12000	19.54	19.54	19.22	17.83	16.67
0 - 15000	24.51	23.79	23.02	21.16	19.64
0 - 20000	34.33	32.25	30.58	27.84	25.66
0 - 25000	44.93	41.66	39.05	35.49	32.65
0 - 35000	64.43	60.00	56.09	51.44	47.63
0 - 50000	83.85	80.14	76.17	71.56	67.51

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APRIL CONTROL FORECAST (T4)

SUMMARY REPORT

MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Seasonally Adjusted Annual Rates, Units as Indicated)

	1981:3	1981:4	1982:1	1982:2	1982:3	1982:4
Employment--Total Nonag.*	2670	2664	2643	2626	2607	2613
% Change	-.6	-1.0	-3.1	-2.6	-2.9	1.1
Manufacturing*	669	667	656	646	629	617
% Change	-2.4	-1.2	-6.7	-5.9	-10.2	-7.3
Non-Manufacturing*	2001	1996	1987	1980	1978	1996
% Change	.0	-.9	-1.8	-1.6	-.4	3.8
Unemployment Rate	6.7	7.3	7.5	8.4	8.1	7.6
Employment Rate Index**	105.5	105.1	104.1	103.2	102.3	102.3
% Change	-1.7	-1.7	-3.8	-3.4	-3.6	.3
Relative to U.S. Index**	102.5	102.9	102.8	102.7	102.8	103.9
Rate of Wage Change	8.8	8.4	7.3	10.6	9.8	5.4
Wage Index Rel. to U.S.**	92.7	92.9	93.0	94.0	94.7	94.9
Avg. Weekly Hours in Mfg.	40.0	40.1	39.6	39.7	39.0	39.2
Rate of Price Inflation	8.9	6.1	-2.4	1.8	12.2	5.7
Relative to U.S. CPI**	96.4	96.0	94.8	94.0	95.0	95.8
Personal Income (mil\$)	65478	66797	67377	68679	70007	71495
% Change	15.1	8.3	3.5	8.0	8.0	8.8
Disposable Income (mil\$)	54051	55434	55971	57029	58571	59822
% Change	14.5	10.6	3.9	7.8	11.3	8.8
Real Per Cap. D.I. Index**	102.7	103.8	105.4	106.9	106.7	107.4
Relative to U.S.**	102.1	103.3	105.1	106.5	106.2	106.5
Rel. Business Cost Index**	95.1	95.2	95.3	95.8	96.5	96.7
Manufacturing**	94.4	94.1	94.3	94.7	95.4	95.9
<u>Non-Manufacturing**</u>	95.4	95.7	95.7	96.4	97.0	97.0

*Thousands of people.

**Indexes equal 100 in calendar 1973.

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APRIL CONTROL FORECAST (T4)

SUMMARY REPORT

MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Seasonally Adjusted Annual Rates, Units as Indicated)

	1983:1	1983:2	1983:3	1983:4	1984:1	1984:2
Employment--Total Nonag.*	2615	2621	2636	2654	2671	2686
% Change	.3	.9	2.3	2.8	2.6	2.2
Manufacturing*	608	606	608	612	616	620
% Change	-5.6	-1.3	1.3	2.7	2.7	2.4
Non-Manufacturing*	2007	2015	2028	2042	2055	2066
% Change	2.2	1.5	2.6	2.8	2.6	2.1
Unemployment Rate	7.8	8.2	8.0	7.7	7.5	7.3
Employment Rate Index**	102.2	102.2	102.6	103.1	103.6	104.1
% Change	-.5	.1	1.6	2.1	1.9	1.6
Relative to U.S. Index**	103.9	103.8	103.7	103.7	103.6	103.4
Rate of Wage Change	4.6	6.5	7.2	7.3	5.4	5.7
Wage Index Rel. to U.S.**	94.9	94.9	95.0	95.1	95.2	95.3
Avg. Weekly Hours in Mfg.	39.4	39.6	39.8	40.0	40.1	40.2
Rate of Price Inflation	-.8	4.3	5.5	5.4	6.0	5.6
Relative to U.S. CPI**	95.8	95.9	95.9	96.0	96.2	96.3
Personal Income (mil\$)	72430	73644	75255	77039	78908	80416
% Change	5.3	6.9	9.0	9.8	10.1	7.9
Disposable Income (mil\$)	60655	61757	63458	65013	66624	67809
% Change	5.7	7.5	11.5	10.2	10.3	7.3
Real Per Cap. D.I. Index**	109.1	109.8	111.1	112.3	113.2	113.6
Relative to U.S.**	107.3	107.2	107.1	107.0	106.8	106.4
Rel. Business Cost Index**	96.8	96.9	97.0	97.1	97.2	97.2
Manufacturing**	95.9	96.0	96.1	96.1	96.2	96.2
<u>Non-Manufacturing**</u>	97.2	97.3	97.4	97.5	97.6	97.6

*Thousands of people.

**Indexes equal 100 in calendar 1973.

APRIL CONTROL FORECAST (T4)

EMPLOYMENT IN MASSACHUSETTS--INDUSTRY DETAIL
(Thousands of People, Seasonally Adjusted)

	1982:1	1982:2	1982:3	1982:4	1983:1	1983:2
Manufacturing	655.8	645.9	628.8	617.0	608.1	606.2
As % of U.S.	3.38	3.39	3.36	3.39	3.34	3.31
Durables	404.4	398.7	388.6	376.0	371.0	370.5
Lumber, Furntr. (24/25)	11.9	11.6	11.0	11.2	11.1	11.2
Stone, Clay, etc. (32)	12.2	12.1	11.5	11.1	10.3	10.4
Primary Metals (33)	16.6	15.9	14.9	14.1	14.2	14.7
Fabricated Metals (34)	49.7	48.2	46.1	45.1	44.3	44.4
Non-elec. Machin. (35)	107.2	105.0	104.6	101.3	98.1	96.0
Elec. Equipment (36)	113.2	113.9	111.2	108.5	106.5	106.9
Transport. Equip. (37)	32.1	31.4	31.6	28.4	30.5	30.8
Instruments (38)	61.5	60.6	57.7	56.3	55.8	56.1
Nondurables	251.4	247.2	240.2	241.0	237.1	235.7
Food (20)	24.8	24.2	24.5	25.3	24.8	24.6
Textiles (22)	22.1	21.3	19.8	20.5	20.7	19.1
Apparel (23)	38.3	38.4	35.2	37.4	36.3	36.5
Paper (26)	26.9	26.1	25.9	25.9	25.0	25.0
Printing (27)	46.4	45.8	45.2	44.4	44.9	44.9
Chemicals (28)	18.0	17.6	17.4	17.1	16.8	16.9
Rubber (30)	30.0	29.6	29.4	28.8	28.5	28.8
Leather (31)	19.2	19.3	18.3	17.8	17.4	17.2
Other Nondurables (39)	25.8	25.0	24.6	23.8	22.7	22.8
Nonmanufacturing	1987.4	1979.6	1977.8	1996.5	2007.2	2014.7
Contract Construction	83.7	77.4	75.6	77.4	80.7	82.4
Transport & Utilities	119.5	119.7	117.8	118.2	117.8	116.6
Wholesale & Retail Trade	572.3	570.7	571.9	565.4	570.7	573.4
Finance, Insurance, etc.	165.9	168.2	170.9	167.8	169.0	170.1
Services & Miscellaneous	680.3	677.5	677.2	694.7	702.5	705.5
Government	365.7	366.1	364.4	372.9	366.4	366.7
Federal	56.7	55.7	55.3	55.5	55.8	56.0
State	91.2	90.9	90.7	94.1	94.3	94.4
Local	217.8	219.5	218.3	223.3	216.3	216.3
Nonag. Wage & Sal. Employ.*	2643.2	2625.6	2606.6	2613.5	2615.3	2620.9
As % of U.S.	2.92	2.92	2.92	2.95	2.94	2.94

*Establishment basis (CES Survey).

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APRIL CONTROL FORECAST (T4)

MASSACHUSETTS EMPLOYMENT, POPULATION, AND LABOR FORCE
(Thousands of People, Seasonally Adjusted)

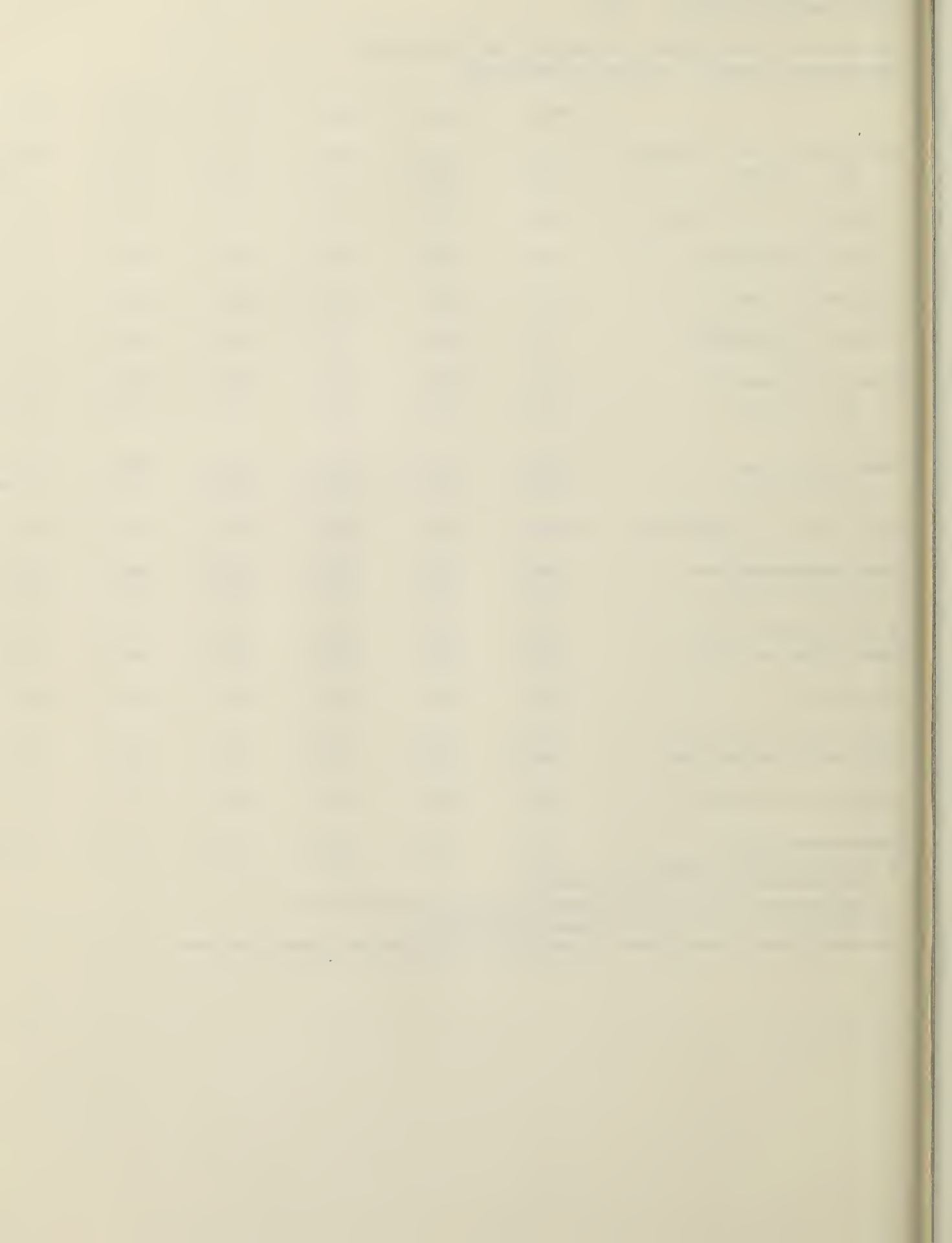
	1982:1	1982:2	1982:3	1982:4	1983:1	1983:2
Nonag. Wage & Sal. Employ.*	2643.2	2625.6	2606.6	2613.5	2615.3	2620.9
As % of U.S.	2.92	2.92	2.92	2.95	2.94	2.94
Plus: All Other Nonag.	166.1	171.3	175.8	175.0	174.5	174.9
Plus: Agriculture	25.5	26.3	25.5	25.5	24.7	24.7
Total Mass. Jobs	2834.8	2823.1	2808.0	2814.0	2814.5	2820.5
Less: Adjustments**	70.2	62.1	-5.4	46.7	80.4	80.4
Total Employment***	2764.7	2761.0	2813.3	2767.3	2734.1	2740.1
As % of U.S.	2.77	2.77	2.82	2.79	2.75	2.73
Mass. Population	5779.0	5780.0	5782.0	5783.0	5785.1	5792.4
As % of U.S.	2.50	2.49	2.49	2.48	2.48	2.48
Mass. Populn. 16 and Over	4463.3	4471.7	4480.0	4489.0	4498.1	4506.5
Mass. Employment Rate****	59.2	58.7	58.2	58.2	58.1	58.2
Indexed to 1973	104.1	103.2	102.3	102.3	102.2	102.2
U.S. Employment Rate	52.1	51.7	51.1	50.6	50.6	50.7
Mass. Index Rel. To U.S.	102.8	102.7	102.8	103.9	103.9	103.8
Labor Force	2988.7	3014.7	3061.0	2996.0	2966.4	2985.0
Participation Rate	67.0	67.4	68.3	66.7	65.9	66.2
U.S. Participation Rate	62.9	63.2	63.3	63.3	63.1	63.3
Number of Unemployed	224.0	253.7	247.7	228.7	232.2	244.9
Unemployment Rate	7.5	8.4	8.1	7.6	7.8	8.2
<u>U.S. Unemployment Rate</u>	8.8	9.4	10.0	10.7	10.2	10.1

*Establishment basis (CES Survey).

**Adjustments for double counting and place of residence.

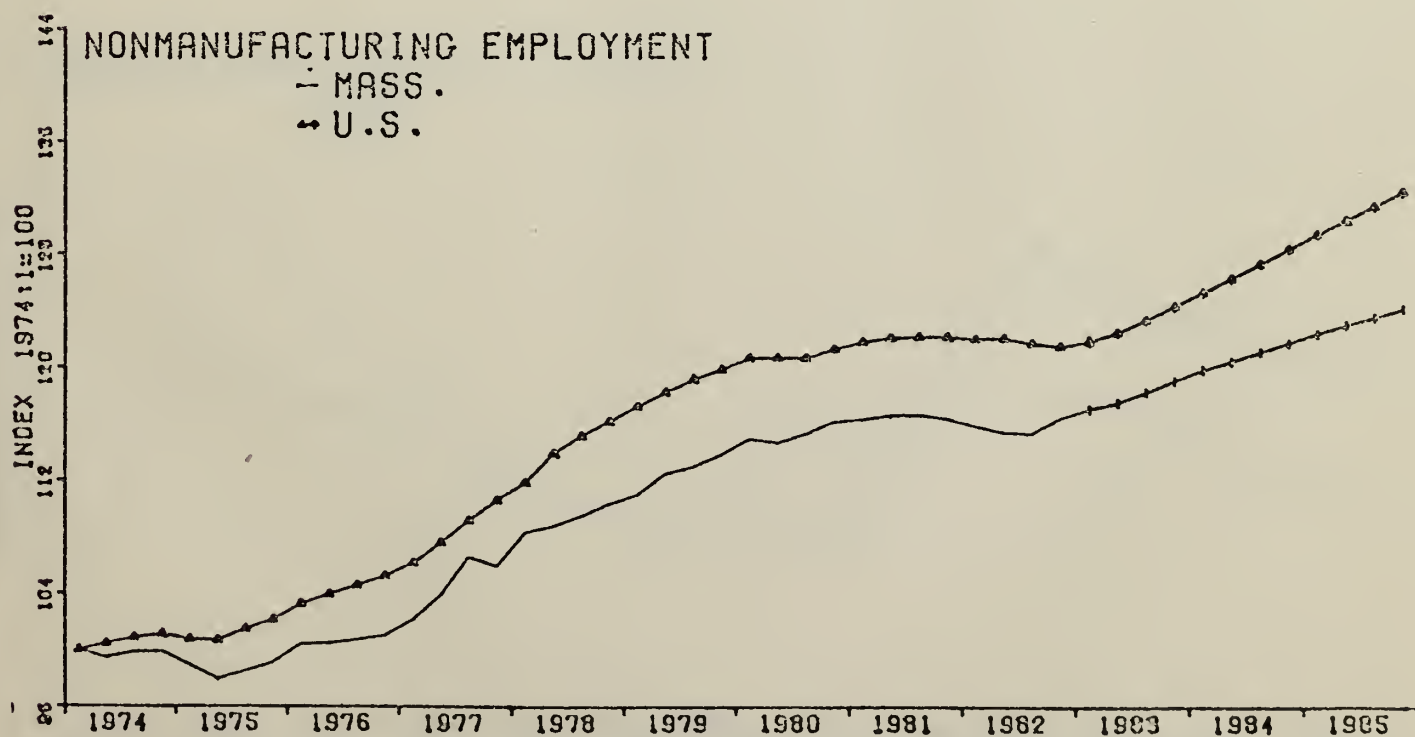
***Household basis (Current Population Survey).

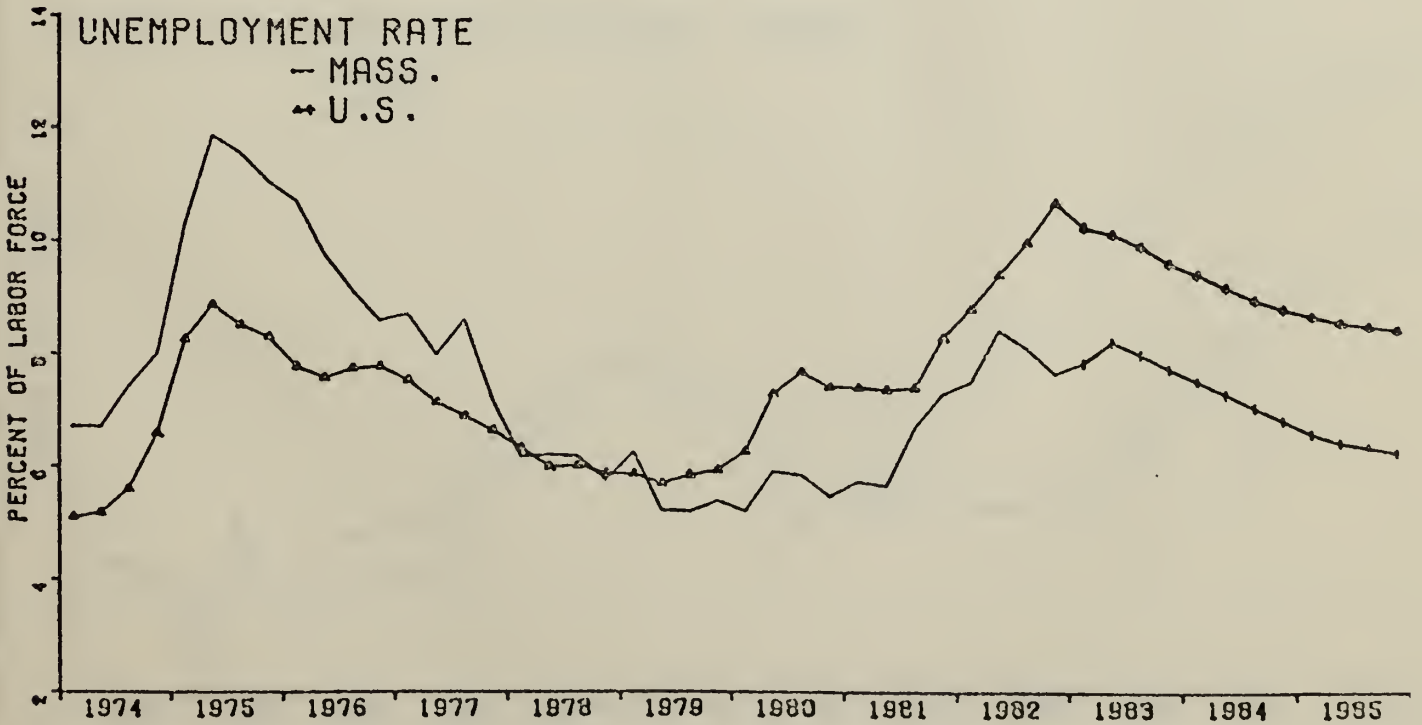
****Total nonag. employment divided by the population sixteen and over.



Data Resources Summary Table for the U.S. Economy - CONTROL032783

	1982				1983				1984				Years				
	IV	I	II	III	IV	I	II	III	1981	1982	1983	1984	1985				
GNP and Its Components																	
Billions of Dollars - SAAR																	
Total Consumption.....	2030.8	2051.7	2084.4	2130.7	2179.2	2229.6	2276.9	2322.4	1843.2	1971.1	2111.5	2299.0	2485.3				
Nonres. Fixed Investment.....	338.4	337.7	339.5	344.5	351.6	360.7	369.9	379.2	346.1	348.0	343.3	374.7	416.9				
Res. Fixed Investment.....	101.4	117.6	127.3	135.1	137.9	144.2	150.0	155.6	105.0	96.2	129.5	152.8	174.4				
Inventory Investment.....	-48.3	-28.2	-9.5	0.2	9.0	15.0	22.8	31.1	20.4	-23.9	-7.1	25.5	35.6				
Net Exports.....	9.1	16.5	16.4	8.3	4.1	4.1	4.4	5.7	26.1	20.6	11.3	5.2	2.9				
Federal Purchases.....	278.7	278.9	278.0	286.7	299.5	306.6	316.1	323.9	228.9	257.9	285.8	320.8	358.3				
State and Local Govt. Purchases.....	398.0	403.2	409.7	416.8	424.0	430.6	439.6	447.9	368.0	389.4	413.4	443.8	480.4				
Gross National Product.....	3108.2	3177.3	3245.9	3322.2	3405.4	3490.7	3579.6	3665.8	2937.7	3059.3	3287.7	3621.7	3953.8				
Real GNP (1972 Dollars).....	1477.2	1491.7	1504.5	1522.6	1541.3	1559.8	1579.7	1597.7	1502.6	1476.8	1515.0	1587.6	1647.4				
Prices and Wages - Annual Rates of Change																	
Implicit Price Deflator.....	3.7	5.0	5.3	4.6	5.1	5.2	5.1	5.1	9.4	5.9	4.7	5.1	5.2				
CPI - All Urban Consumers.....	2.0	-0.7	4.0	5.2	5.0	5.3	5.1	5.0	10.3	6.2	3.2	5.0	5.4				
Producer Price Index - Finished Goods	4.2	-3.1	0.0	4.4	5.3	4.9	4.8	5.0	9.3	4.0	1.7	4.6	5.7				
Compensation per Hour.....	5.5	5.4	5.2	5.8	5.8	7.3	5.9	5.9	9.6	7.2	5.6	6.2	6.2				
Core Inflation.....	8.0	7.3	6.5	5.8	5.2	4.8	4.6	4.5	9.7	8.6	6.2	4.6	4.5				
Production and Other Key Measures																	
Industrial Production (1967=1.000)...	1.353	1.373	1.397	1.425	1.453	1.481	1.511	1.539	1.509	1.386	1.412	1.524	1.616				
Annual Rate of Change.....	-8.1	6.2	7.3	8.0	8.3	7.9	8.4	7.5	2.6	-8.1	1.8	7.9	6.1				
Housing Starts (Mil. Units).....	1.261	1.679	1.506	1.548	1.619	1.648	1.693	1.723	1.100	1.059	1.588	1.703	1.799				
Retail Unit Car Sales (Mil. Units)...	8.7	8.3	8.4	9.1	9.6	9.8	10.1	10.3	8.5	8.0	8.9	10.2	10.8				
Civilian Unemployment Rate (%).....	10.7	10.2	10.1	9.9	9.6	9.4	9.2	9.0	7.6	9.7	10.0	9.1	8.5				
Federal Budget Surplus (NIA).....	-203.1	-190.8	-187.4	-203.6	-206.9	-203.3	-201.1	-197.7	-60.0	-149.3	-197.2	-201.0	-208.1				
Money and Interest Rates																	
Money Supply (M-2).....	1944.7	2045.6	2113.3	2161.6	2210.3	2237.5	2288.7	2341.7	1779.8	1944.7	2210.3	2399.9	2635.7				
% Change, 4th-Qtr. to 4th-Qtr.	9.3	12.5	14.2	13.7	13.7	9.4	8.3	8.3	9.4	9.3	13.7	8.6	9.8				
New AA Corp. Utility Rate (%).....	12.54	12.09	11.21	10.67	10.39	10.29	10.28	10.32	16.25	15.13	11.09	10.32	10.62				
New High-Grade Corp. Bond Rate (%)...	11.07	11.22	10.55	10.13	9.91	9.85	9.86	9.90	15.01	13.89	10.45	9.89	10.19				
Federal Funds Rate (%).....	9.29	8.61	8.24	7.80	8.14	8.82	8.62	8.22	16.38	12.26	8.20	8.42	9.01				
Prime Rate (%).....	11.96	10.88	10.35	10.18	10.55	11.35	11.09	10.77	18.87	14.86	10.49	10.91	10.99				
Incomes - Billions of Dollars																	
Personal Income.....	2624.0	2646.0	2693.9	2757.1	2824.1	2897.1	2960.5	3026.0	2415.8	2569.8	2730.3	2993.7	3262.8				
Real Disposable Income (%Ch).....	0.3	1.5	3.8	6.9	5.5	5.7	3.6	3.4	2.5	1.1	2.7	4.8	3.6				
Saving Rate (%).....	6.0	5.9	6.2	6.8	7.0	7.3	7.3	7.3	6.4	6.5	6.5	7.3	7.8				
Profits Before Tax.....	178.8	192.9	207.7	219.6	232.7	242.4	253.7	263.4	232.1	175.6	213.2	258.3	291.2				
Profits After Tax.....	119.4	128.2	139.8	148.6	156.8	163.8	170.8	176.4	150.9	117.5	143.3	173.5	197.0				
Company Profits.....	79.3	94.3	102.2	109.6	114.3	117.8	121.9	125.8	107.3	88.5	105.1	123.7	137.6				
Four-Qtr. Percent Change.....	-25.0	6.5	11.0	16.6	44.1	24.9	19.3	14.7	2.9	-17.6	18.8	17.7	11.3				
Composition of Real GNP - Annual Rates of Change																	
Gross National Product.....	-1.0	4.0	3.5	4.9	5.0	4.9	5.2	4.6	1.9	-1.7	2.6	4.8	3.8				
Final Sales.....	5.4	1.8	1.2	3.7	4.0	4.3	4.4	3.8	1.0	-0.5	2.2	3.9	3.6				
Total Consumption.....	4.5	2.1	2.4	4.1	4.5	4.3	3.8	3.2	1.8	1.0	2.8	3.9	2.9				
Nonres. Fixed Investment.....	-6.0	-2.9	-0.5	2.3	4.4	6.0	6.3	6.0	3.5	-3.6	-3.2	4.9	6.7				
Equipment.....	-6.5	-3.3	-0.3	3.1	5.8	8.1	9.0	8.7	2.4	-6.4	-3.7	6.8	9.2				
Nonres. Construction.....	-4.8	-1.9	-1.0	0.6	1.6	1.7	0.7	0.4	6.3	2.9	-2.0	1.0	1.1				
Res. Fixed Investment.....	39.1	74.5	30.1	19.7	2.4	11.9	9.9	9.5	-4.9	-10.2	31.6	11.1	7.7				
Exports.....	-21.6	-2.1	-2.2	2.0	4.3	6.7	5.1	5.9	-0.5	-6.5	-6.7	4.6	5.6				
Imports.....	-25.2	2.6	5.2	7.9	8.0	7.2	5.1	5.0	7.2	-0.2	-1.0	6.5	4.9				
Federal Government.....	32.6	-5.5	-7.8	6.2	8.0	3.7	7.4	4.8	3.7	5.4	5.3	5.0	4.4				
State and Local Governments.....	-0.2	-0.5	0.9	1.0	0.8	0.4	2.1	1.9	-0.8	-1.0	0.2	1.2	2.0				





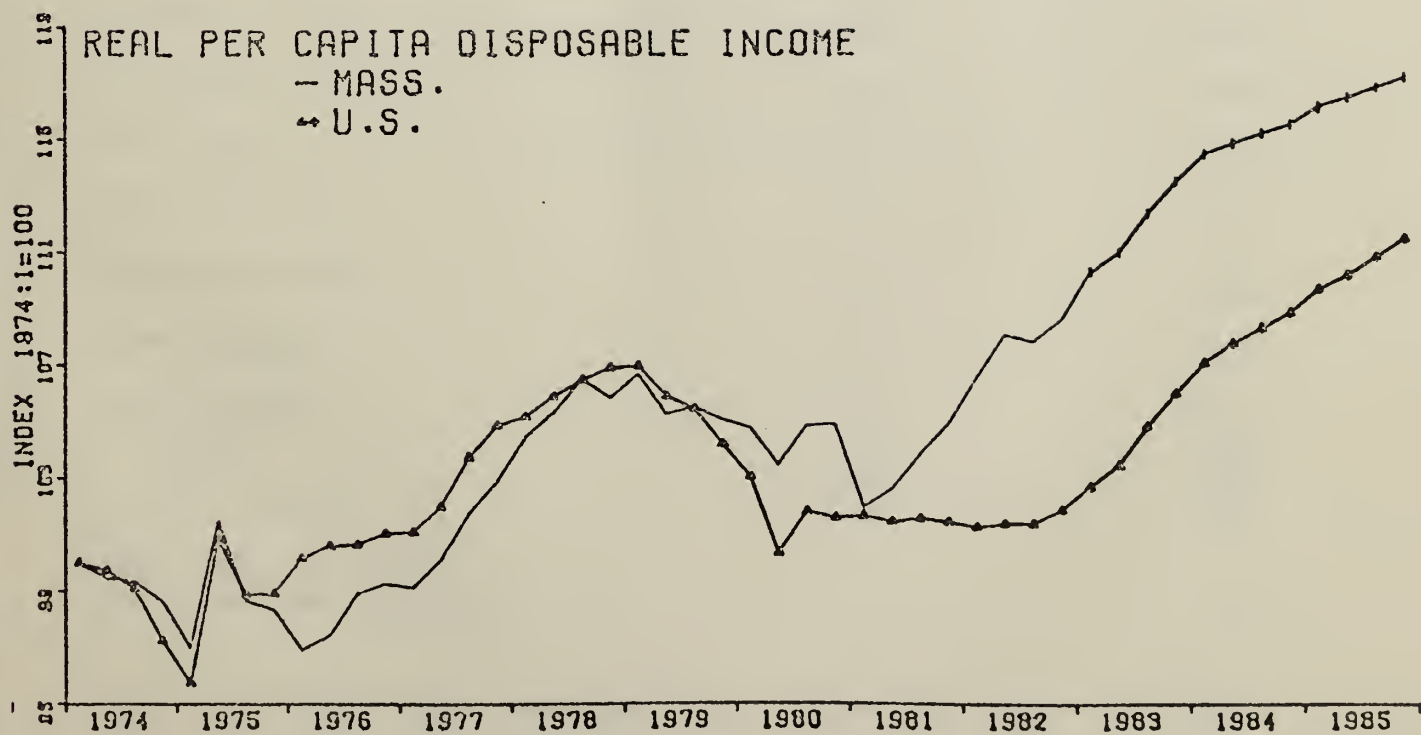
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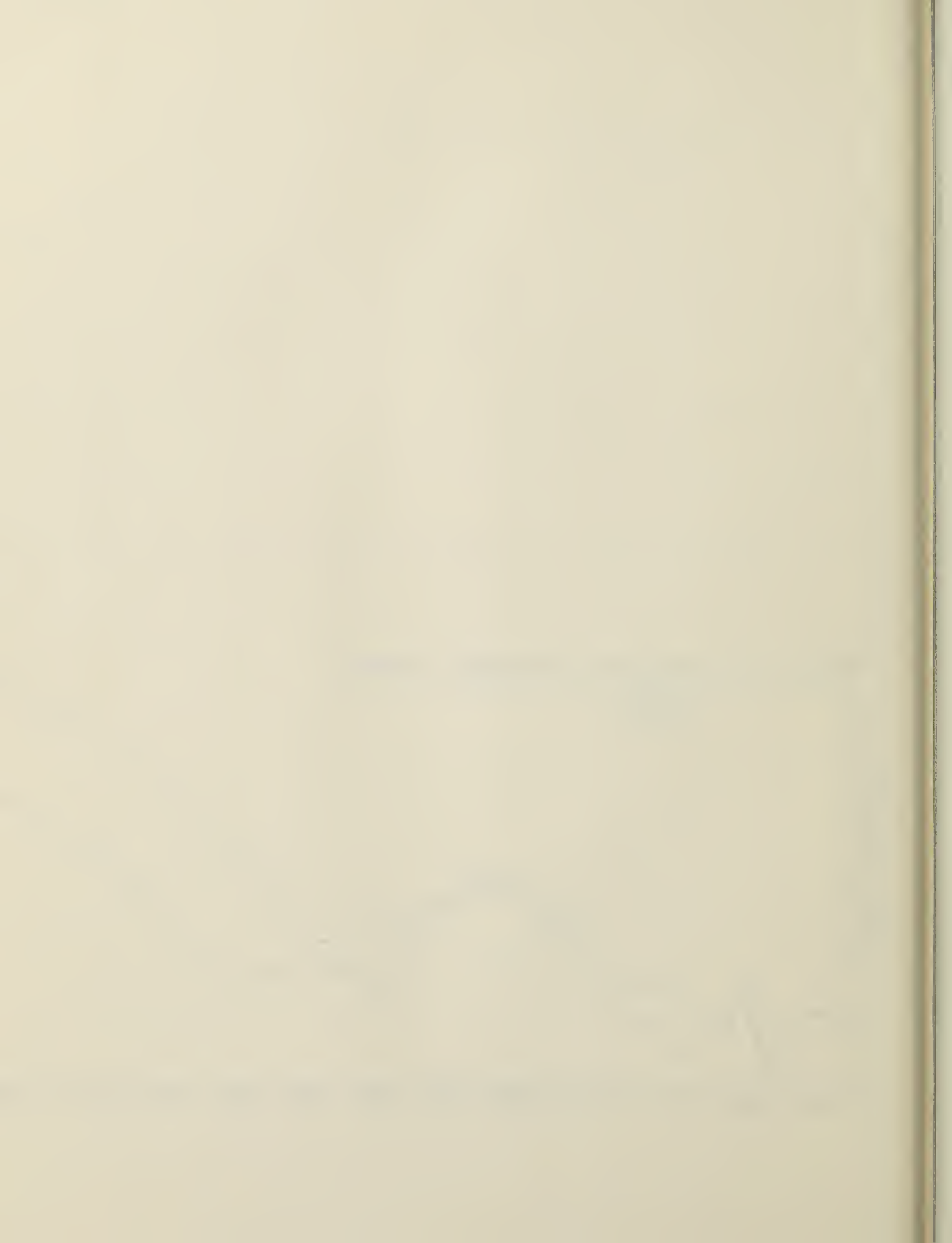
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The APRIL 1983

Massachusetts Revenue Analysis and Forecasting Model Tax Forecast

by

George Treyz & Roy Williams

	Fiscal 1983 (Millions of Dollars)	Fiscal 1984
Alcoholic Beverages	83	88
Commercial Banks	48	45
Savings Banks	47	48
Cigarettes	144	144
Corporations	498	582
Deeds	12	14
Estate and Inheritance	110	122
Income	2441	2696
Insurance	131	148
Motor Fuel	251	269
Public Utilities	39	42
Racing and Boxing	38	41
Room Occupancy	27	30
Sales and Use	1027	1122
Regular	669	712
Meals	182	196
Motor Vehicle	176	214
Misc. Dept. of Revenue	1	1
Beano, Raffles & Bazaars	7	8
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Total (of amounts before rounding)	4903	5399

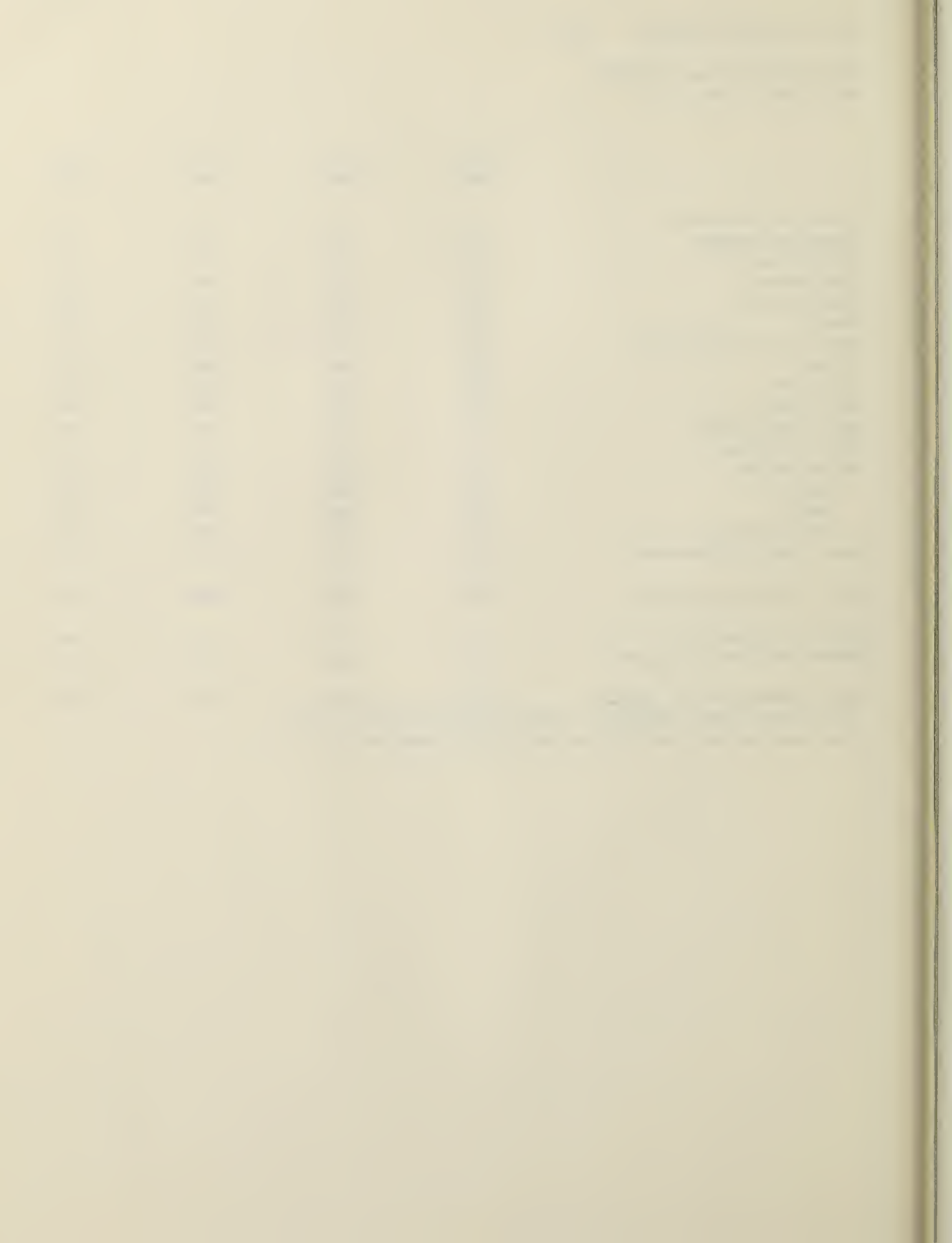
APRIL CONTROL FORECAST (T4)

MASSACHUSETTS TAX REVENUES
(Millions of Dollars)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
Alcoholic Beverages	84	83	88	91
Commercial Banks	29	48	45	48
Savings Banks	41	47	48	52
Cigarettes	145	144	144	145
Corporations	498	498	582	689
Deeds	12	12	14	15
Estate and Inheritance	99	110	122	130
Income	2324	2441	2696	2960
Insurance	122	131	148	175
Motor Fuel	269	251	269	261
Public Utilities	30	39	42	50
Room Occupancy	24	27	30	34
Sales and Use	917	1027	1122	1215
Regular	608	669	712	757
Meals	164	182	196	212
Motor Vehicle	146	176	214	246
Misc. Dept. of Revenue*	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Dept. of Revenue Total	4598	4858	5350	5867
Racing and Boxing	35	38	41	45
Beano, Raffles & Bazaars**	<u>6</u>	<u>7</u>	<u>8</u>	<u>8</u>
<u>Comptrollers' Rept. Total</u>	4640	4903	5399	5920

*Includes Beano, Raffles & Bazaars before January, 1978

**As reported by Comptroller less amount reported by D. of R.



APRIL CONTROL FORECAST (T4)

MASSACHUSETTS TAX REVENUES

(Per Cent Changes at Annual Rates)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
Alcoholic Beverages	-.35	-1.74	6.47	2.95
Commercial Banks	-23.14	62.18	-5.81	7.99
Savings Banks	8.42	15.56	1.83	8.39
Cigarettes	-1.87	-.88	.18	.24
Corporations	12.60	-.07	16.84	18.55
Deeds	-3.66	-.59	11.60	8.04
Estate and Inheritance	20.99	10.71	10.85	6.64
Income	12.95	5.05	10.42	9.82
Insurance	7.19	7.36	12.62	18.56
Motor Fuel	13.35	-6.84	7.30	-2.88
Public Utilities	70.49	28.14	8.57	18.57
Room Occupancy	10.01	9.93	11.50	12.57
Sales and Use	6.66	11.92	9.25	8.36
Regular	6.13	10.05	6.44	6.43
Meals	5.61	10.70	7.77	8.00
Motor Vehicle	10.20	21.11	21.40	15.09
Misc. Dept. of Revenue*	<u>95.79</u>	<u>-22.07</u>	<u>21.59</u>	<u>7.90</u>
Dept. of Revenue Total	10.65	5.66	10.12	9.67
Racing and Boxing	8.76	8.58	8.88	7.94
Beano, Raffles & Bazaars**	<u>6.84</u>	<u>8.35</u>	<u>9.10</u>	<u>7.94</u>
<u>Comptrollers' Rept. Total</u>	10.63	5.68	10.11	9.65

*Includes Beano, Raffles & Bazaars before January, 1978

**As reported by Comptroller less amount reported by D. of R.

APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Money amounts in Millions of Dollars)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
ALCOHOLIC BEVERAGES	84.4	83.0	88.3	91.0
Surprise Factor	.0	-.7	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	84.4	83.7	88.3	91.0
Portion explained below (SA)	84.5	83.8	88.4	91.0
Mult	.97	.93	.93	.93
Tax Rate (per 67\$ of sales)	.24	.24	.24	.24
Population over 18	4338	4364	4398	4428
Real disp. income per adult(1.2*)	6.249	6.463	6.742	6.865
<u>Tax effect ratio (-1.3*)</u>	.90	.90	.90	.91
*Elasticity (power diff. from 1 to which variable is raised.)				
Same variable without exponent:				
Real disp. income per adult	4.713	4.849	5.025	5.103
Tax effect ratio	1.09	1.08	1.08	1.08
COMMERCIAL BANKS	29.4	47.7	44.9	48.5
Surprise Factor	.0	4.0	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	29.4	43.7	44.9	48.5
Portion explained below (SA)	29.3	43.7	44.8	48.4
Mult	.71	.99	.99	.99
Tax Rate	.1254	.1254	.1254	.1254
Commercial bank profits (mil\$)	2167	2305	2367	2554
SAVINGS BANKS	40.8	47.2	48.0	52.1
Surprise Factor	.0	1.6	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	40.8	45.6	48.0	52.1
Portion explained below (SA)	40.6	45.4	47.7	51.6
Mult	1.115	1.182	1.182	1.182
Tax Rate (Fixed wt. index*)	1.00	1.00	1.00	1.00
Sav. bank deposits index (.37*)	1.089	1.106	1.233	1.372
<u>Comm. bank profits index (.63*)</u>	1.52	1.63	1.67	1.79

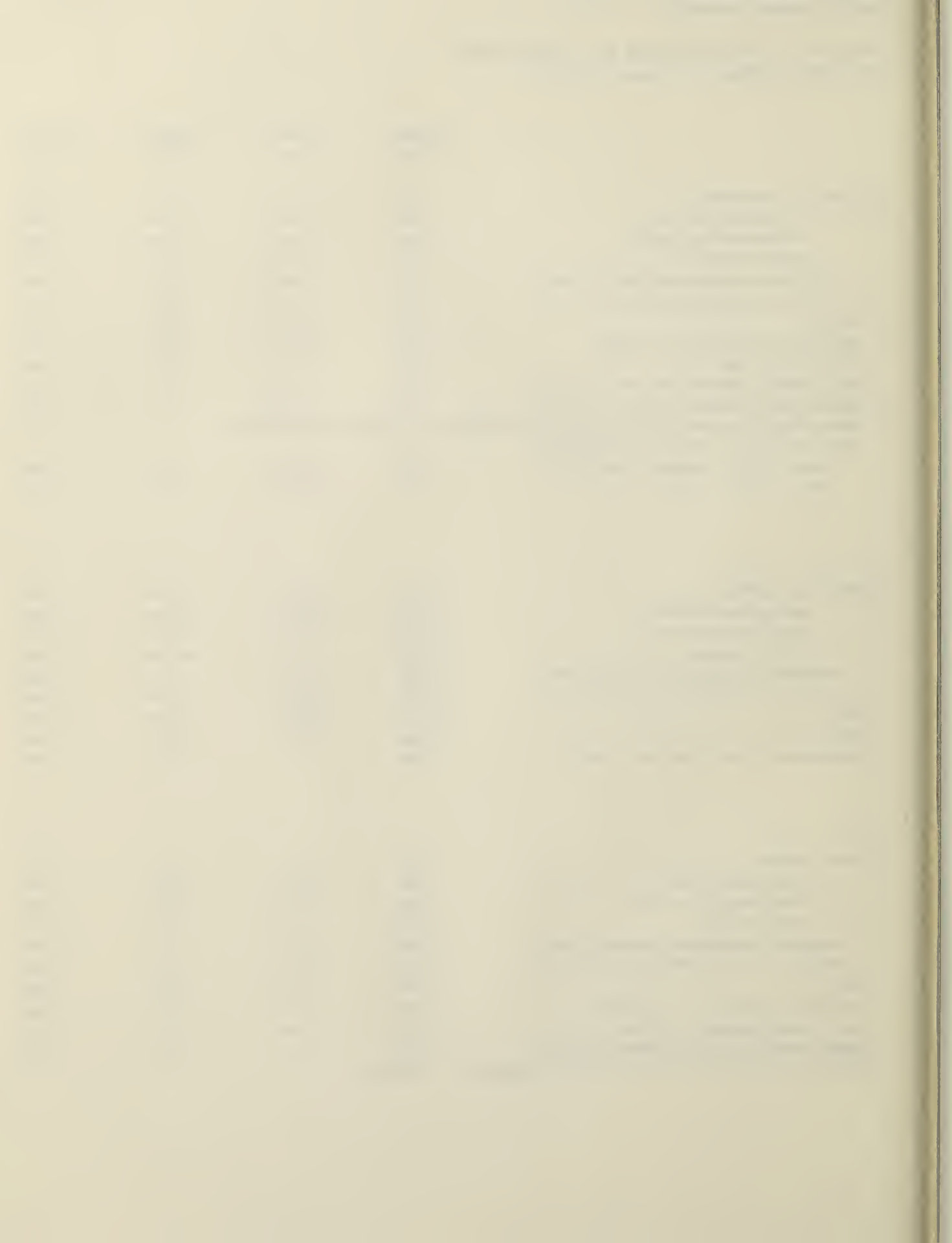
*Weights used for rate and base composite indexes.

APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS
(Per Cent Changes at Annual Rates)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
ALCOHOLIC BEVERAGES	- .35	-1.74	6.47	2.95
Surprise Factor	.00	-.88	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	0.00	0.00	.94	0.00
Portion explained below (NS)	-.35	-.86	5.53	2.95
Portion explained below (SA)	-.25	-.87	5.51	2.94
Mult	-3.46	-5.00	0.00	0.00
Tax Rate (per 67\$ of sales)	0.00	0.00	0.00	0.00
Population over 18	1.26	.60	.77	.69
Real disp. income per adult(1.2*)	1.45	3.41	4.32	1.83
Tax effect ratio (-1.3*)	.55	.30	.37	.41
*Elasticity (power diff. from 1 to which variable is raised.)				
Same variable without exponent:				
Real disp. income per adult	1.23	2.88	3.64	1.54
Tax effect ratio	-.42	-.23	-.28	-.31
COMMERCIAL BANKS	-23.14	62.18	-5.81	7.99
Surprise Factor	0.00	13.55	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	-17.22	-.00	-8.59	0.00
Portion explained below (NS)	-5.92	48.63	2.78	7.99
Portion explained below (SA)	-5.42	48.91	2.68	7.93
Mult	-9.11	40.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00
Commercial bank profits (mil\$)	4.06	6.36	2.68	7.93
SAVINGS BANKS	8.42	15.56	1.83	8.39
Surprise Factor	.00	3.97	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	-.00	-.00	-3.63	0.00
Portion explained below (NS)	8.42	11.59	5.46	8.39
Portion explained below (SA)	8.78	11.72	5.10	8.24
Mult	5.09	6.00	0.00	0.00
Tax Rate (Fixed wt. index*)	0.00	0.00	0.00	0.00
Sav. bank deposits index (.37*)	3.50	1.54	11.45	11.31
Comm. bank profits index (.63*)	3.52	7.02	2.58	6.92

*Weights used for rate and base composite indexes.



APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Money amounts in Millions of Dollars)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
CIGARETTES	145.4	144.1	144.3	144.7
Surprise Factor	.0	.1	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	145.4	144.0	144.3	144.7
Portion explained below (SA)	145.4	144.0	144.3	144.7
Mult	1.01	1.00	1.00	1.00
Tax Rate	.21	.21	.21	.21
Population over 18	4338	4364	4398	4428
Per capita Use (Time trend)	.656	.648	.641	.633
Tax effect ratio (-.75*)	.84	.85	.85	.86

*Elasticity (power diff. from 1 to which variable is raised.)

Same variable without exponent:

Tax effect ratio	1.26	1.25	1.24	1.22
------------------	------	------	------	------

CORPORATIONS	498.1	497.7	581.5	689.4
Surprise Factor	.0	16.7	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	498.1	481.1	581.5	689.4
Portion explained below (SA)	502.9	480.1	577.9	686.8
Mult	1.22	1.38	1.38	1.38
Corporate profits (1.01*)	5353	4396	5222	6216
Tax rate	.095	.095	.095	.095
Manufact. Capital stock (.08*)	23439	25654	28167	31481
Tax rate	.0026	.0026	.0026	.0026
Mnfact. equip. investment (-.09*)	2604	2308	2323	2618
Credit rate	.03	.03	.03	.03

*Probable approx. contribution to total collections in a typical year.

DEEDS	12.5	12.4	13.9	15.0
Surprise Factor	.0	-.3	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	12.5	12.7	13.9	15.0
Portion explained below (SA)	12.5	12.7	13.9	15.0
Mult	.74	.69	.69	.69
Tax Rate (per \$500)	1.14	1.14	1.14	1.14
Disposable income	55621	60201	65726	70962

APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS
(Per Cent Changes at Annual Rates)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
CIGARETTES	-1.87	-.88	.18	.24
Surprise Factor	.00	.04	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	-2.03	-.00	-.04	0.00
Portion explained below (NS)	.16	-.93	.22	.24
Portion explained below (SA)	.26	-.93	.21	.24
Mult	-.89	-1.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00
Population over 18	1.26	.60	.77	.69
Per capita Use (Time trend)	-1.19	-1.19	-1.19	-1.19
<u>Tax effect ratio (-.75*)</u>	1.11	.67	.64	.76
*Elasticity (power diff. from 1 to which variable is raised.)				
Same variable without exponent:				
Tax effect ratio	-1.47	-.89	-.85	-1.01

CORPORATIONS	12.60	-.07	16.84	18.55
Surprise Factor	0.00	3.35	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	3.69	0.00	-4.05	0.00
Portion explained below (NS)	8.91	-3.41	20.88	18.55
Portion explained below (SA)	9.85	-4.53	20.37	18.85
Mult	20.57	13.00	0.00	0.00
Corporate profits (1.01*)	-9.25	-17.87	18.79	19.03
Tax rate	0.00	0.00	0.00	0.00
Manufact. Capital stock (.08*)	15.63	9.45	9.80	11.76
Tax rate	0.00	0.00	0.00	0.00
Mnfact. equip. investment (-.09*)	5.91	-11.37	.64	12.71
<u>Credit rate</u>	0.00	0.00	0.00	0.00

*Probable approx. contribution to total collections in a typical year.

DEEDS	-3.66	-.59	11.60	8.04
Surprise Factor	0.00	-2.32	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	0.00	0.00	2.54	0.00
Portion explained below (NS)	-3.66	1.73	9.06	8.04
Portion explained below (SA)	-3.75	1.74	9.18	7.97
Mult	-12.44	-6.00	0.00	0.00
Tax Rate (per \$500)	0.00	0.00	0.00	0.00
Disposable income	9.93	8.23	9.18	7.97

APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

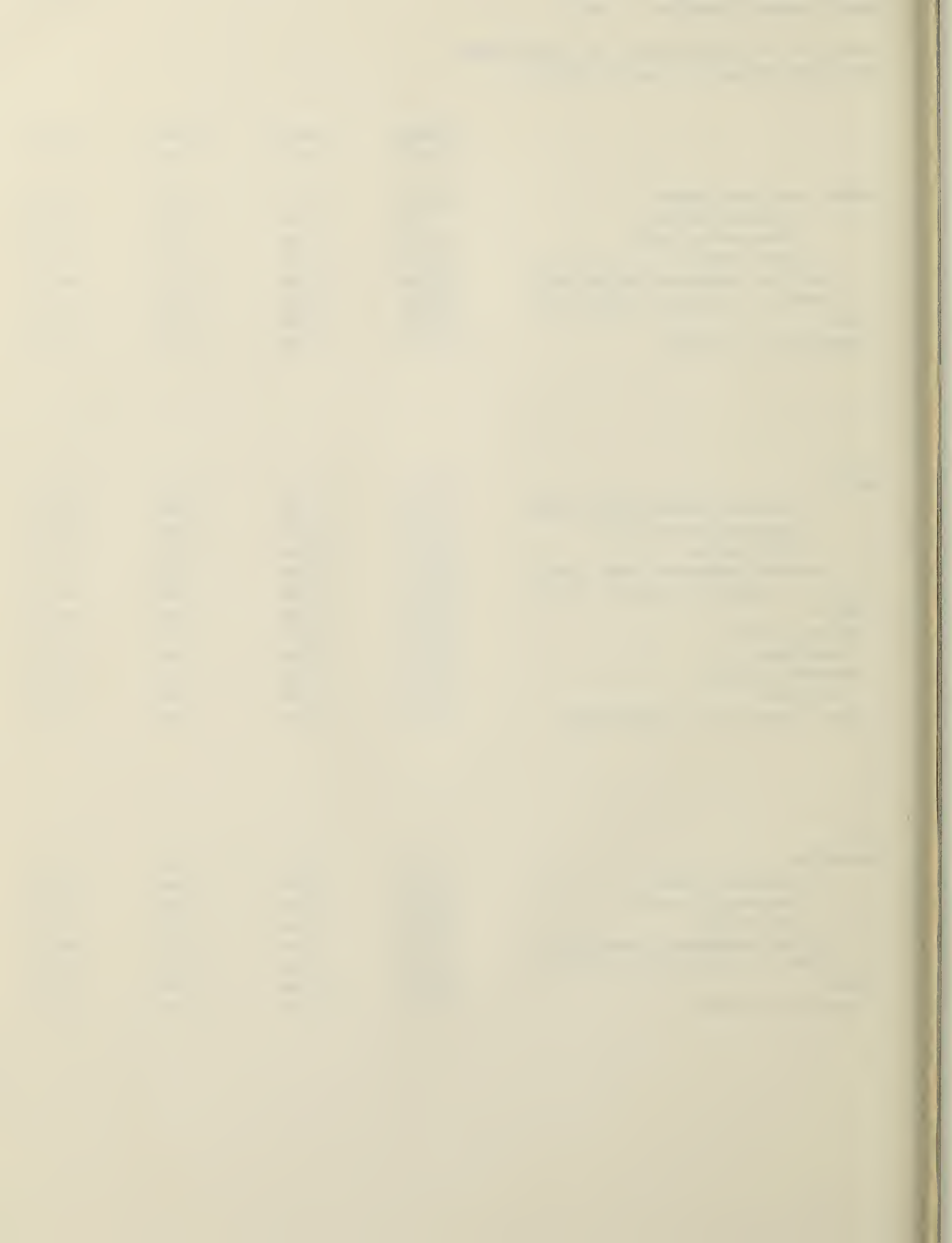
(Money amounts in Millions of Dollars)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
ESTATE AND INHERITANCE	99.4	110.0	121.9	130.0
Surprise Factor	.0	1.3	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	99.4	108.7	121.9	130.0
Portion explained below (SA)	99.4	108.8	122.1	130.1
Mult	1.08	1.12	1.12	1.12
Household net worth	131473	138409	155270	165473
INCOME	2324.1	2441.4	2695.9	2960.5
Surprise Factor (not used)	.0	5.1	0.0	0.0
Processing Factor	-31.0	-70.4	-57.4	-60.6
Portion explained (see (NS)	2355.1	2511.8	2753.3	3021.1
separate detail) (SA)	2355.1	2511.8	2753.3	3021.1
Mult	1.10	1.11	1.11	1.11
Earned Income	46342	49158	53457	57919
Tax Rate	.0538	.0538	.0538	.0538
Unearned Income	2360	2419	2525	2824
Tax Rate	.1075	.1075	.1075	.1075
Total Deductions & Exemptions	11166	11866	12333	12907
INSURANCE	122.2	131.2	147.8	175.2
Surprise Factor	.0	8.0	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	122.2	123.3	147.8	175.2
Portion explained below (SA)	123.9	123.2	146.3	174.1
Mult	1.05	1.27	1.27	1.27
Corporate profits	5353	4396	5222	6216

APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS
(Per Cent Changes at Annual Rates)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
ESTATE AND INHERITANCE	20.99	10.71	10.85	6.64
Surprise Factor	.00	1.28	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	0.00	-.00	-1.30	0.00
Portion explained below (NS)	20.99	9.43	12.15	6.64
Portion explained below (SA)	20.89	9.49	12.18	6.57
Mult	10.39	4.00	0.00	0.00
Household net worth	9.52	5.28	12.18	6.57
INCOME	12.95	5.05	10.42	9.82
Surprise Factor (not used)	.00	.21	0.00	0.00
Processing Factor	-1.49	-2.99	-2.28	-2.20
Echo Factor	1.36	1.38	3.09	2.29
Portion explained (see (NS)	13.08	6.65	9.61	9.73
separate detail) (SA)	13.08	6.65	9.61	9.73
Mult	1.84	1.00	0.00	0.00
Earned Income	9.25	6.08	8.75	8.35
Tax Rate	0.00	0.00	0.00	0.00
Unearned Income	7.16	2.50	4.39	11.84
Tax Rate	0.00	0.00	0.00	0.00
Total Deductions & Exemptions	2.58	6.27	3.94	4.65
INSURANCE	7.19	7.36	12.62	18.56
Surprise Factor	.00	6.51	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	0.00	0.00	-7.27	0.00
Portion explained below (NS)	7.19	.85	19.89	18.56
Portion explained below (SA)	8.49	-.63	18.79	19.03
Mult	19.55	21.00	0.00	0.00
Corporate profits	-9.25	-17.87	18.79	19.03



APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Money amounts in Millions of Dollars)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
MOTOR FUELS	269.2	250.8	269.1	261.4
Surprise Factor	.0	-3.8	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	269.2	254.7	269.1	261.4
Portion explained below (SA)	269.2	254.3	269.2	261.6
Mult	.99	.96	.96	.96
Tax Rate	.112	.105	.110	.110
Consumption, 72 \$, gas & oil	720.6	745.4	752.9	730.4
<u>Tax effect ratio (-.23*)</u>	1.000	1.002	1.003	1.004
*Elasticity (power diff. from 1 to which variable is raised.)				
Same variable without exponent:				
Tax effect ratio	1.002	.990	.988	.981

PUBLIC UTILITIES	30.1	38.5	41.8	49.6
Surprise Factor	.0	3.5	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	30.1	35.0	41.8	49.6
Portion explained below (SA)	30.6	34.9	41.5	49.3
Mult	1.04	1.44	1.44	1.44
Corporate profits	5353	4396	5222	6216

ROOM OCCUPANCY	24.3	26.7	29.8	33.5
Surprise Factor	.0	.5	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	24.3	26.3	29.8	33.5
Portion explained below (SA)	24.3	26.4	30.0	33.7
Mult	1.31	1.34	1.34	1.34
Tax Rate	.057	.057	.057	.057
Real p. c. disp. income (.74*)	2.470	2.510	2.584	2.626
Disposable income	56263	60320	65850	71448
<u>Employment effect (2.1*)</u>	.84	.82	.83	.84

*Elasticity (power diff. from 1 to which variable is raised.)

Same variable without exponent:

Real per cap. dispos. income	3.388	3.462	3.600	3.679
Employment effect	.92	.91	.91	.92

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APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Per Cent Changes at Annual Rates)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
MOTOR FUELS	13.35	-6.84	7.30	-2.88
Surprise Factor	.00	-1.43	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	-0.00	-0.00	1.62	0.00
Portion explained below (NS)	13.35	-5.41	5.68	-2.88
Portion explained below (SA)	14.53	-5.54	5.86	-2.83
Mult	-2.11	-3.00	0.00	0.00
Tax Rate	12.86	-6.18	4.76	0.00
Consumption, 72 \$, gas & oil	3.72	3.45	1.00	-2.99
Tax effect ratio (-.23*)	-0.07	.28	.06	.17
*Elasticity (power diff. from 1 to which variable is raised.)				
Same variable without exponent:				
Tax effect ratio	.30	-1.16	-.24	-.70
PUBLIC UTILITIES	70.49	28.14	8.57	18.57
Surprise Factor	0.00	11.65	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	0.00	0.00	-10.86	0.00
Portion explained below (NS)	70.49	16.49	19.43	18.57
Portion explained below (SA)	72.96	14.16	18.79	19.03
Mult	90.59	39.00	0.00	0.00
Corporate profits	-9.25	-17.87	18.79	19.03
ROOM OCCUPANCY	10.01	9.93	11.50	12.57
Surprise Factor	0.00	1.87	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	-5.22	0.00	-1.92	0.00
Portion explained below (NS)	15.22	8.06	13.43	12.57
Portion explained below (SA)	14.90	8.33	13.77	12.39
Mult	7.32	2.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00
Real p. c. disp. income (.74*)	.76	1.63	2.93	1.63
Disposable income	9.68	7.21	9.17	8.50
Employment effect (2.1*)	-3.10	-2.55	1.21	1.95
*Elasticity (power diff. from 1 to which variable is raised.)				
Same variable without exponent:				
Real per cap. dispos. income	1.02	2.20	3.98	2.20
Employment effect	-1.49	-1.22	.58	.92

APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

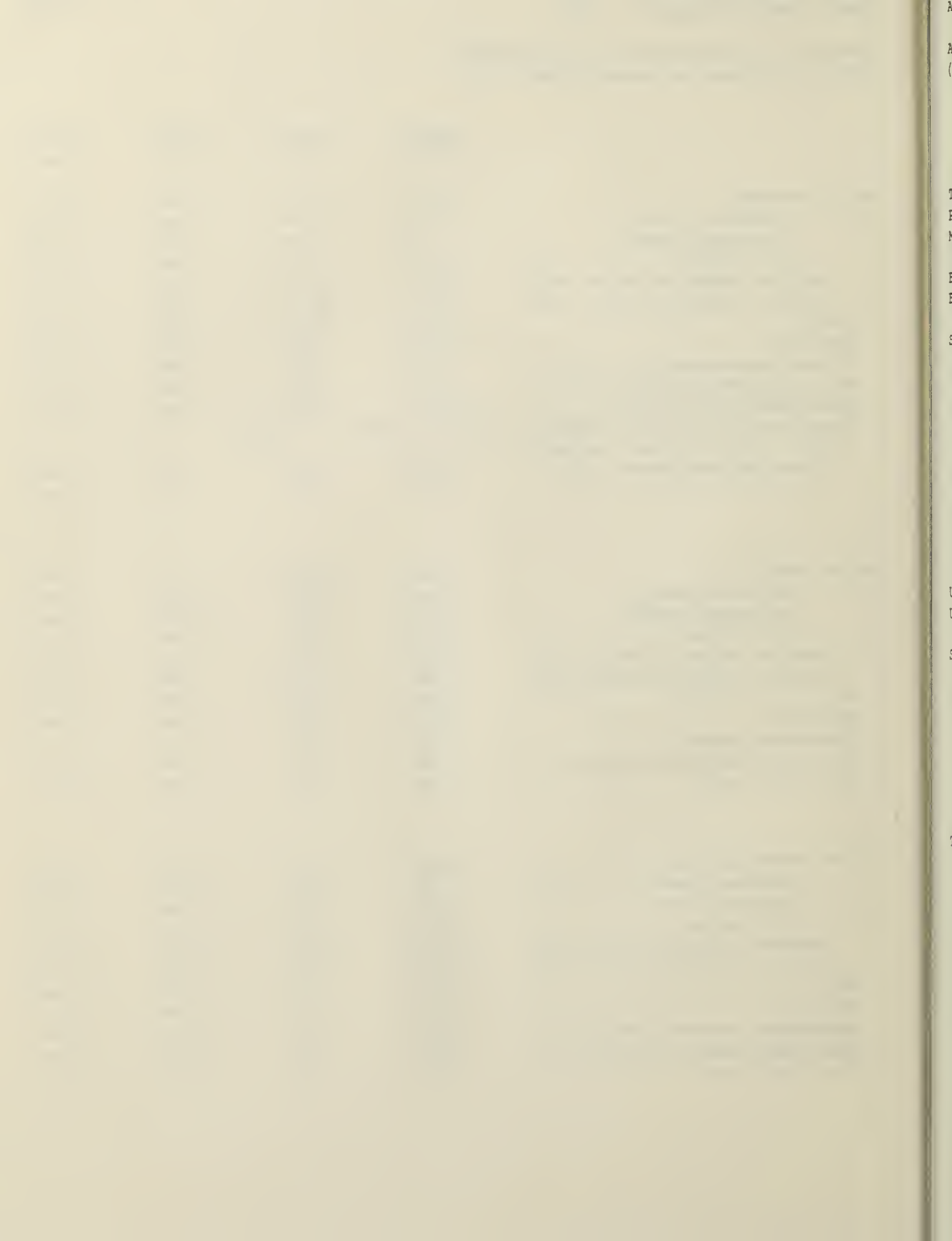
(Money amounts in Millions of Dollars)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
SALES--REGULAR	607.5	668.6	711.7	757.4
Surprise Factor	.0	3.5	0.0	0.0
Processing Factor	4.0	0.0	0.0	0.0
Portion explained below (NS)	603.5	665.1	711.7	757.4
Portion explained below (SA)	603.6	665.0	711.7	757.5
Mult	1.14	1.19	1.19	1.19
Tax Rate	.050	.050	.050	.050
Consumption expend. net of m.v.	3595	3752	4035	4289
Rel. employment effect (1.03*)	1.01	1.03	1.02	1.02
Tax effect ratio (-5.5*)	.76	.76	.76	.76
*Elasticity (power diff. from 1 to which variable is raised.)				
Same variable without exponent:				
Relative employment effect	1.01	1.03	1.02	1.02
Tax effect ratio	1.05	1.05	1.05	1.05
SALES--MEALS	164.2	181.8	195.9	211.6
Surprise Factor	.0	2.3	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	164.2	179.5	195.9	211.6
Portion explained below (SA)	164.3	179.7	196.1	211.8
Mult	.96	.97	.97	.97
Tax Rate	.050	.050	.050	.050
Disposable income	55621	60201	65726	70962
Tax effect ratio (-1.25*)	.90	.90	.90	.90
Tax effect ratio	1.05	1.05	1.05	1.05
SALES--MOTOR VEHICLES	145.6	176.3	214.1	246.4
Surprise Factor	.0	1.5	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0
Portion explained below (NS)	145.6	174.9	214.1	246.4
Portion explained below (SA)	145.1	174.7	213.5	246.0
Mult	1.18	1.25	1.25	1.25
Tax Rate	.050	.050	.050	.050
Consumption expend., motor veh.	2668	3030	3703	4268
Tax effect ratio (-8.0*)	.68	.68	.68	.68
Tax effect ratio	1.05	1.05	1.05	1.05

APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS
(Per Cent Changes at Annual Rates)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
SALES--REGULAR	6.13	10.05	6.44	6.43
Surprise Factor	0.00	.58	0.00	0.00
Processing Factor	.73	0.00	0.00	0.00
Echo Factor	-4.04	-.73	-.56	0.00
Portion explained below (NS)	9.45	10.20	7.00	6.43
Portion explained below (SA)	9.47	10.17	7.02	6.43
Mult	6.20	4.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00
Consumption expend. net of m.v.	3.96	4.35	7.54	6.30
Rel. employment effect (1.03*)	-.85	1.52	-.49	.12
Tax effect ratio (-5.5*)	0.00	0.00	0.00	0.00
*Elasticity (power diff. from 1 to which variable is raised.)				
Same variable without exponent:				
Relative employment effect	-.82	1.47	-.47	.12
Tax effect ratio	0.00	0.00	0.00	0.00
SALES--MEALS	5.61	10.70	7.77	8.00
Surprise Factor	.00	1.38	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	-1.38	-.00	-1.37	0.00
Portion explained below (NS)	6.98	9.31	9.14	8.00
Portion explained below (SA)	6.98	9.32	9.18	7.97
Mult	-2.68	1.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00
Disposable income	9.93	8.23	9.18	7.97
Tax effect ratio (-1.25*)	0.00	0.00	0.00	0.00
Tax effect ratio	0.00	0.00	0.00	0.00
SALES--MOTOR VEHICLES	10.20	21.11	21.40	15.09
Surprise Factor	.00	1.00	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00
Echo Factor	-2.56	0.00	-1.01	0.00
Portion explained below (NS)	12.76	20.11	22.41	15.09
Portion explained below (SA)	12.01	20.38	22.21	15.26
Mult	4.26	6.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00
Consumption expend., motor veh.	7.44	13.57	22.21	15.26
Tax effect ratio (-8.0*)	0.00	0.00	0.00	0.00
Tax effect ratio	0.00	0.00	0.00	0.00



APRIL CONTROL FORECAST (T4)

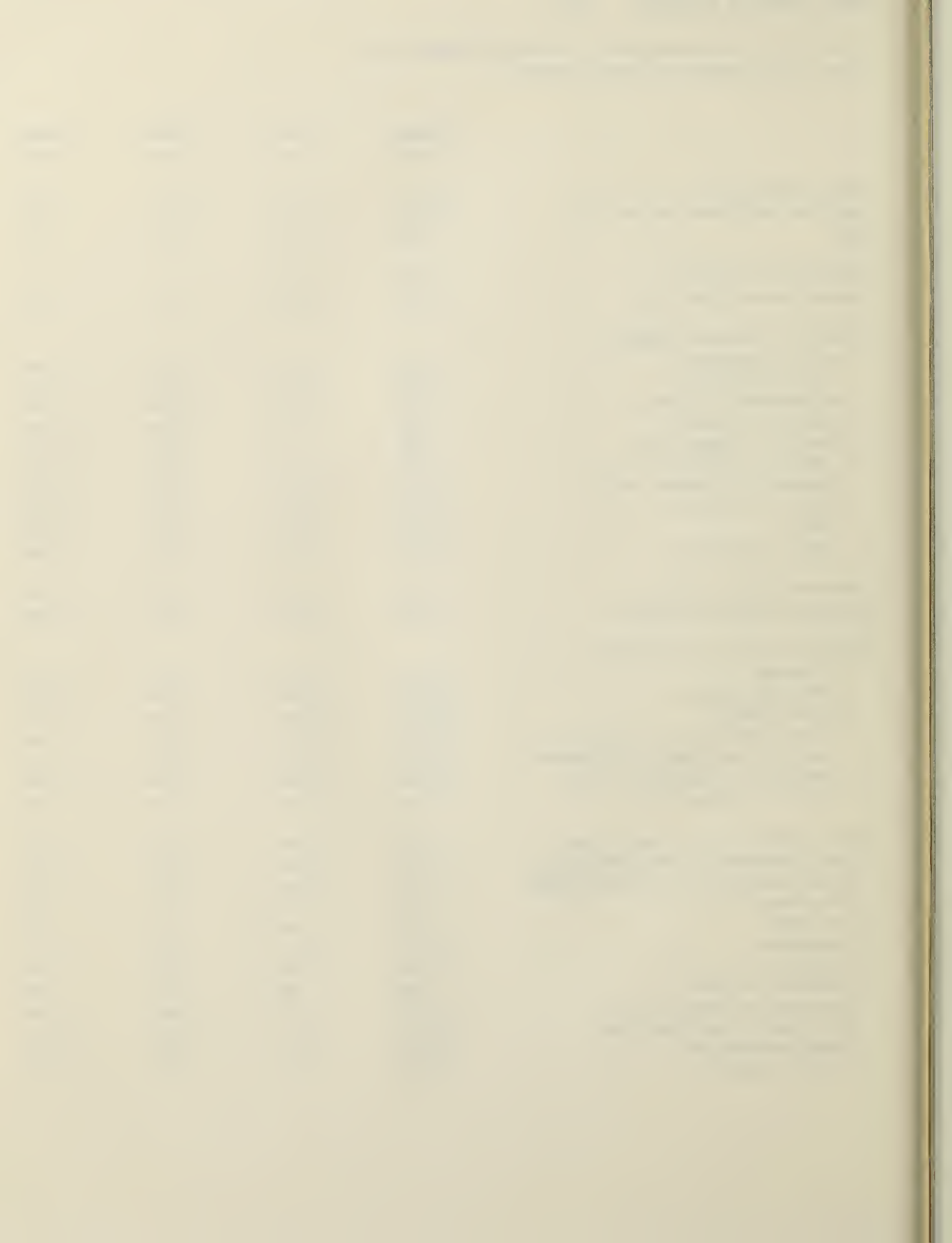
ANALYSIS OF MASSACHUSETTS INCOME TAX COLLECTIONS
(Money amounts in Millions of Dollars)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
TOTAL INCOME TAX	2324.1	2441.4	2695.9	2960.5
Portion explained below (SA)	2355.1	2511.8	2753.3	3021.1
Mult	1.10	1.11	1.11	1.11
Earned Income Base	46342	49158	53457	57919
Earned Income Tax Rate	.0538	.0538	.0538	.0538
Sources of Earned Income:				
Wages & Salaries	41942	44348	48198	52084
Per Cent Taxed	97.0	97.0	97.0	97.0
Proprietors' Income	2469	2785	3175	3397
Per Cent Taxed	67.0	67.0	67.0	67.0
Pensions & Annuities	938	1031	1133	1252
Per Cent Taxed	51.0	51.0	51.0	51.0
Interest (at earned rate)	4838	5413	5650	6319
Per Cent Taxed	45.0	45.0	45.0	45.0
Other	2570	2776	2984	3248
Per Cent Taxed	52.5	52.5	52.5	52.5
Unearned Income Base	2360	2419	2525	2824
Unearned Income Tax Rate	.1075	.1075	.1075	.1075
Sources of Unearned Income:				
Dividends	2062	2307	2408	2693
Per Cent Taxed	54.0	54.0	54.0	54.0
Capital Gains	1188	886	925	1034
Statutory Per Cent Taxed	50.0	40.0	40.0	40.0
Per Cent of Stat. C.G. Taxed	50.0	50.0	50.0	50.0
Interest (at unearned rate)	1209	1353	1412	1580
Per Cent Taxed	54.0	54.0	54.0	54.0
Total Deductions & Exemptions	11166	11866	12333	12907
Basic Exemption (Wage earners)	5354	5806	5910	6042
Basic Exemption (Self-employed)	334	385	391	400
Blindness	6	6	6	6
Day Care	401	398	397	396
Dependents	1351	1328	1321	1320
Elderly	306	310	315	321
Separate Filing	-11	-12	-12	-12
Non-working Spouses	349	346	333	319
Retirement Contributions	2516	2720	3037	3425
Other deductions	217	232	252	272
Other Exemptions	354	379	411	444

APRIL CONTROL FORECAST (T4)

ANALYSIS OF MASSACHUSETTS INCOME TAX COLLECTIONS
(Per Cent Changes at Annual Rates)

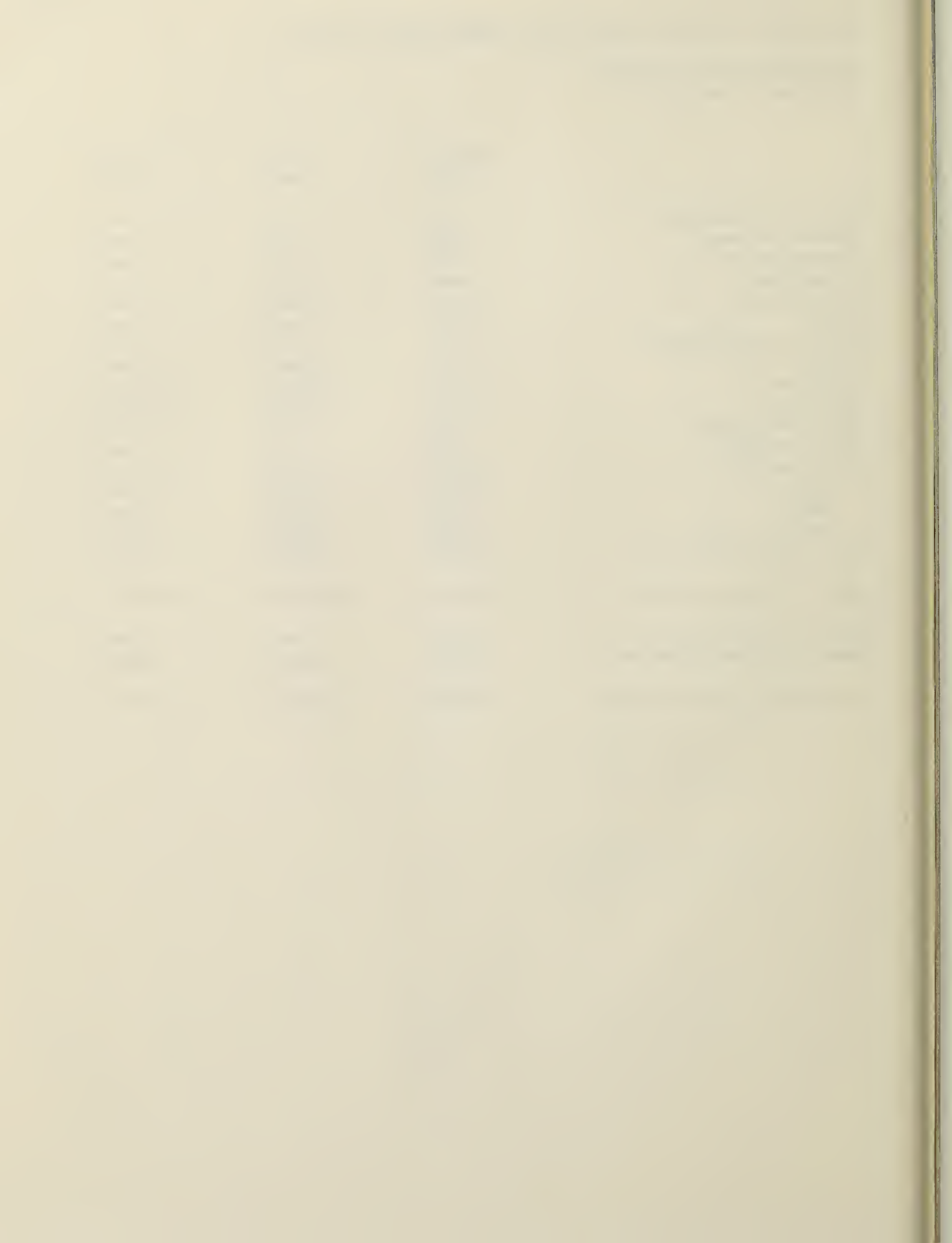
	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
TOTAL INCOME TAX	12.95	5.05	10.42	9.82
Portion explained below (SA)	13.08	6.65	9.61	9.73
Mult	1.84	1.00	0.00	0.00
Earned Income Base	9.25	6.08	8.75	8.35
Earned Income Tax Rate	0.00	0.00	0.00	0.00
Sources of Earned Income:				
Wages & Salaries	8.44	5.74	8.68	8.06
Per Cent Taxed	0.00	0.00	0.00	0.00
Proprietors' Income	1.06	12.80	14.02	6.99
Per Cent Taxed	0.00	0.00	0.00	0.00
Pensions & Annuities	9.38	9.89	9.87	10.51
Per Cent Taxed	0.00	0.00	0.00	0.00
Interest (at earned rate)	31.34	11.88	4.39	11.84
Per Cent Taxed	0.00	0.00	0.00	0.00
Other	11.29	8.00	7.50	8.87
Per Cent Taxed	0.00	0.00	0.00	0.00
Unearned Income Base	7.16	2.50	4.39	11.84
Unearned Income Tax Rate	0.00	0.00	0.00	0.00
Sources of Unearned Income:				
Dividends	11.71	11.88	4.39	11.84
Per Cent Taxed	0.00	0.00	0.00	0.00
Capital Gains	-16.21	-25.41	4.39	11.84
Statutory Per Cent Taxed	-28.57	-20.00	0.00	0.00
Per Cent of Stat. C.G. Taxed	0.00	0.00	0.00	0.00
Interest (at unearned rate)	31.34	11.88	4.39	11.84
Per Cent Taxed	0.00	0.00	0.00	0.00
Total Deductions & Exemptions	2.58	6.27	3.94	4.65
Basic Exemption (Wage earners)	-.42	8.45	1.79	2.23
Basic Exemption (Self-employed)	2.00	15.19	1.52	2.34
Blindness	.33	.12	.44	.45
Day Care	-.36	-.85	-.31	-.25
Dependents	-3.07	-1.70	-.56	-.10
Elderly	1.44	1.38	1.70	1.73
Separate Filing	NM	NM	NM	NM
Non-working Spouses	-1.10	-.98	-3.61	-4.14
Retirement Contributions	13.19	8.11	11.62	12.78
Other deductions	10.08	7.17	8.36	8.24
Other Exemptions	10.08	7.17	8.36	8.24



THE EFFECT OF APRIL INPUTS ON THE JANUARY MEPA FORECAST

MASSACHUSETTS TAX REVENUES
(Millions of Dollars)

	Fiscal 1983	Fiscal 1984	Fiscal 1985
Alcoholic Beverages	.433	1.945	1.902
Commercial Banks	.020	.308	.417
Savings Banks	.071	1.082	1.640
Cigarettes	-.050	-.151	-.252
Corporations	4.196	59.888	73.656
Deeds	-.001	-.019	-.074
Estate and Inheritance	.036	1.221	1.648
Income	17.742	35.557	23.911
Insurance	1.267	16.586	19.533
Motor Fuel	4.318	17.640	15.916
Public Utilities	.343	4.676	5.527
Room Occupancy	.172	.710	.452
Sales and Use	5.917	27.438	12.772
Regular	5.509	17.000	-2.320
Meals	-.016	-.248	-1.067
Motor Vehicle	.423	10.686	16.158
Misc. Dept. of Revenue	<u>-.000</u>	<u>-.001</u>	<u>-.005</u>
Dept. of Revenue Total	34.463	166.879	157.043
Racing and Boxing	-.004	-.047	-.233
Beano, Raffles & Bazaars	<u>-.001</u>	<u>-.008</u>	<u>-.043</u>
Comptrollers' Rept. Total	34.458	166.824	156.767



APRIL CONTROL FORECAST (T4)

SUMMARY REPORT

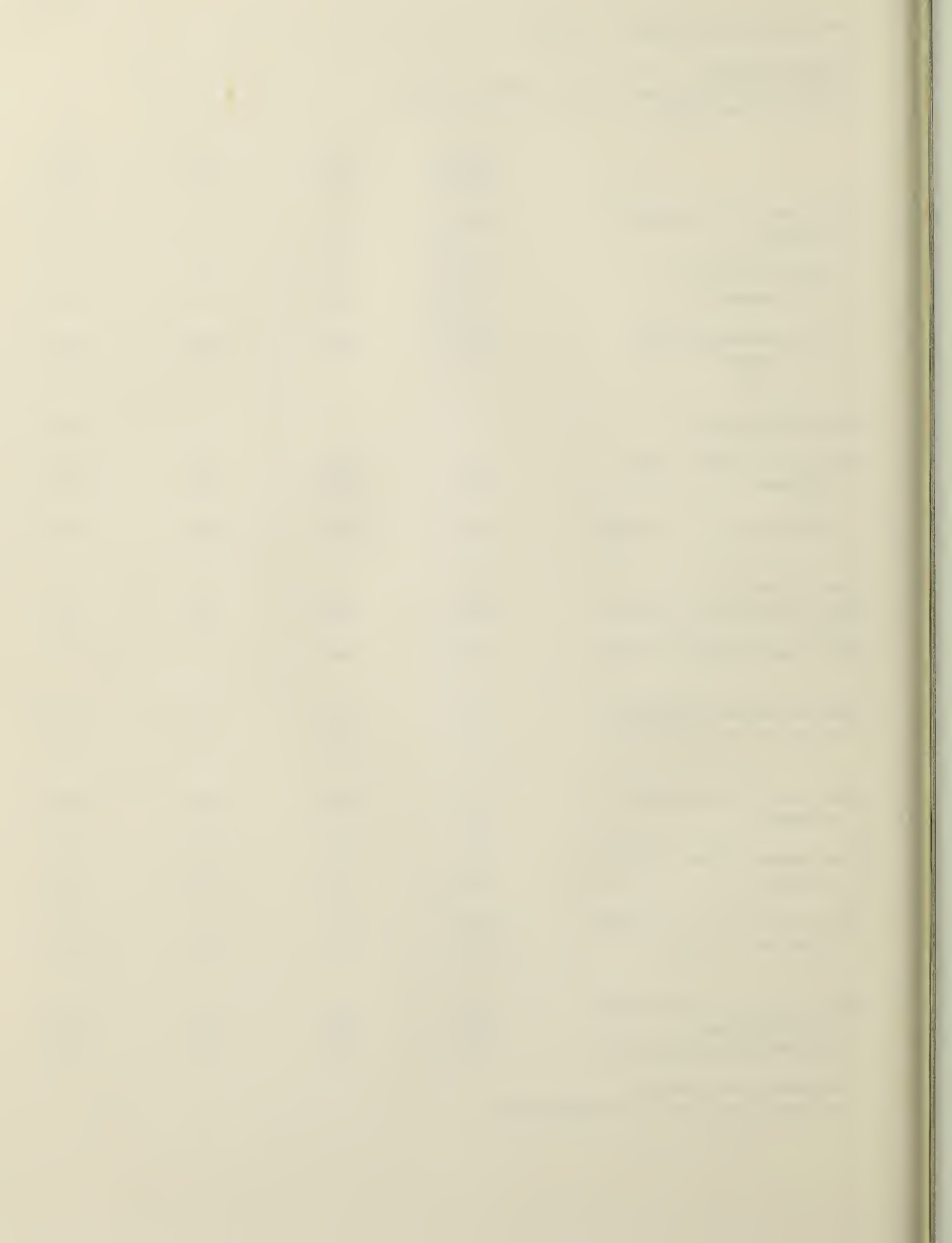
MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Units as Indicated)

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
Employment--Total Nonag.*	2651	2614	2662	2722
% Change	-.4	-1.4	1.8	2.3
Manufacturing*	660	615	614	628
% Change	-1.4	-6.8	-.1	2.2
Non-Manufacturing*	1991	1999	2047	2094
% Change	-.0	.4	2.4	2.3
Unemployment Rate	7.5	7.9	7.6	6.7
Employment Rate Index**	104.5	102.2	103.4	105.1
% Change	-1.4	-2.1	1.1	1.7
Relative to U.S. Index**	102.7	103.6	103.6	103.0
Rate of Wage Change	8.2	7.8	6.3	5.4
Wage Index Rel. to U.S.**	93.1	94.9	95.2	95.4
Avg. Weekly Hours in Mfg.	39.8	39.3	40.0	40.3
Rate of Price Inflation	7.2	4.6	4.5	5.6
Relative to U.S. CPI**	95.3	95.6	96.1	96.5
Personal Income (mil\$)	67083	71894	77905	84325
% Change	10.1	7.2	8.4	8.2
Disposable Income (mil\$)	55621	60201	65726	70962
% Change	9.9	8.2	9.2	8.0
Real Per Cap. D.I. Index**	104.7	108.2	112.6	114.6
Relative to U.S.**	104.3	106.8	106.8	105.9
Rel. Business Cost Index**	95.4	96.7	97.1	97.3
Manufacturing**	94.4	95.8	96.2	96.3
<u>Non-Manufacturing**</u>	<u>95.8</u>	<u>97.1</u>	<u>97.5</u>	<u>97.7</u>

*Thousands of people.

**Indexes equal 100 in calendar 1973.



Adjustments to the MRAF Forecast, April 1983

The default multiplicative factors based on Fiscal Year 1982 were adjusted to reflect collections experience in the 12-month period ending March 31, 1983.

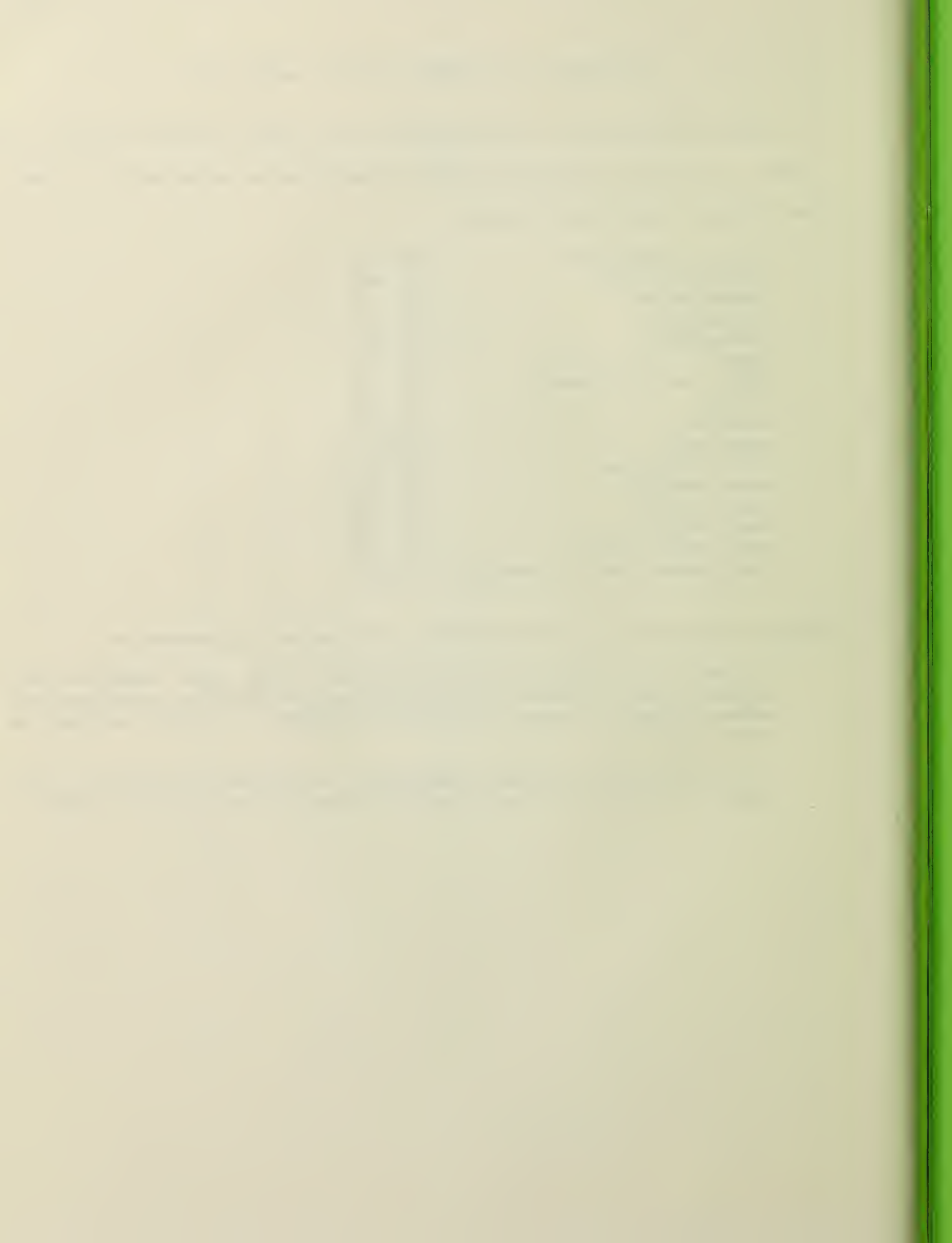
The following taxes were affected:

Alcoholic Beverages	down	5%
Commercial Banks	up	40%
Savings Banks	up	6%
Cigarettes	down	1%
Corporations	up	13%
Deeds	down	6%
Estate and Inheritance	up	4%
Income	up	1%
Insurance	up	21%
Motor Fuel	down	3%
Public Utilities	up	39%
Room Occupancy	up	2%
Regular Sales	up	4%
Meals Sales	up	1%
Motor Vehicle Sales	up	6%
Miscellaneous Dept. of Revenue	down	20%

The processing factor for the personal income tax has two components:

(1) The loss to the state from the increase in the basic exemption for calendar year 1982 (net of the reduction in withholding which went into effect too late to cover it fully) is estimated to be \$16 million in Fiscal Year 1983.

(2) The loss due to the rental deduction, not explicitly forecast by the model, is estimated to be \$55 million in FY83 and \$59 million in FY84.



MASS. UMI.2: M38/4

The January 1983

Massachusetts Economic Policy Analysis (MEPA)

Short-term Economic Forecast

Long-term Economic Forecast

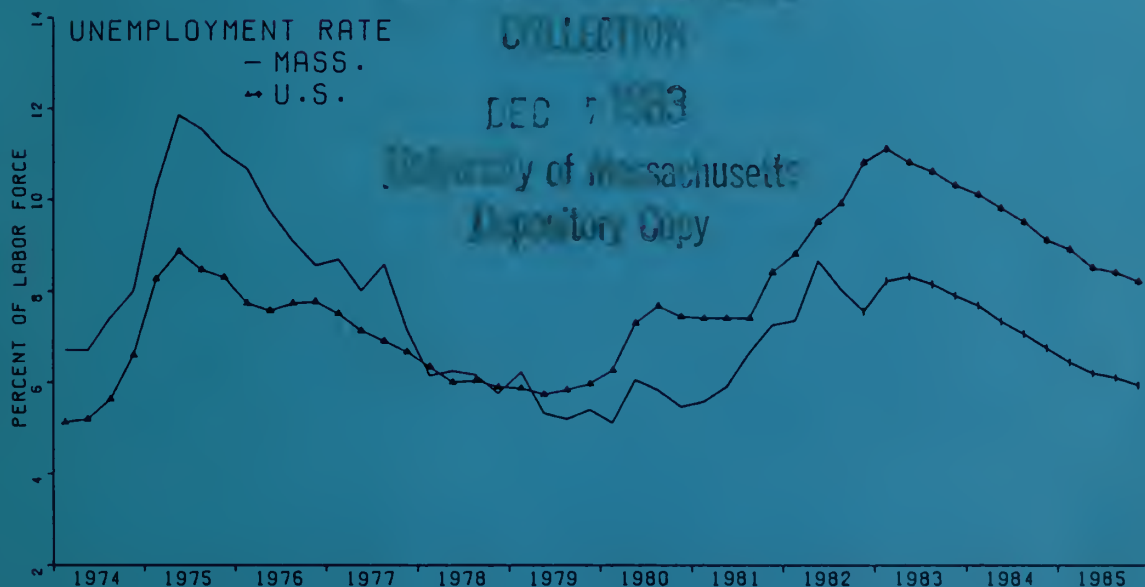
and

Tax Revenue Forecast

by

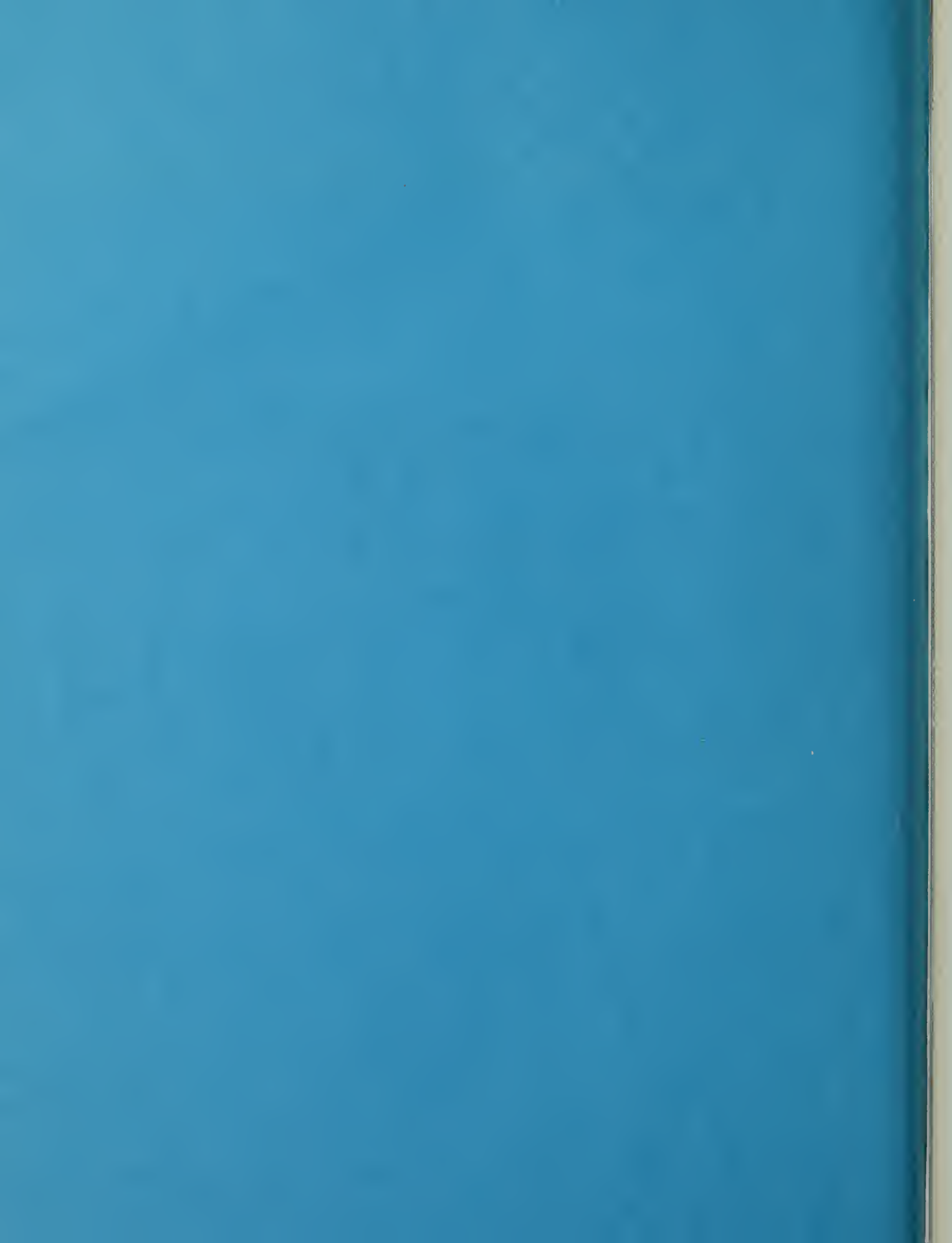
George Treyz and Roy Williams *

*model
forecast*



*Director and Associate Director, respectively, of the MEPA project, Economics Department, University of Massachusetts, Amherst, MA 01003. (Tel. 413-545-0915). Major contributions to the Long-Range Forecast were made by Professor James Kindahl, Economics Department. Technical assistance from Margaret Larson and Loren Lidsky, MEPA staff.

Support from the Department of Public Welfare, the Division of Employment Security, the Department of Commerce and Development, the Metropolitan District Commission, and Massport. National inputs from CONTROL122882 from Data Resources, Inc.



The January 1983

Massachusetts Economic Policy Analysis (MEPA)

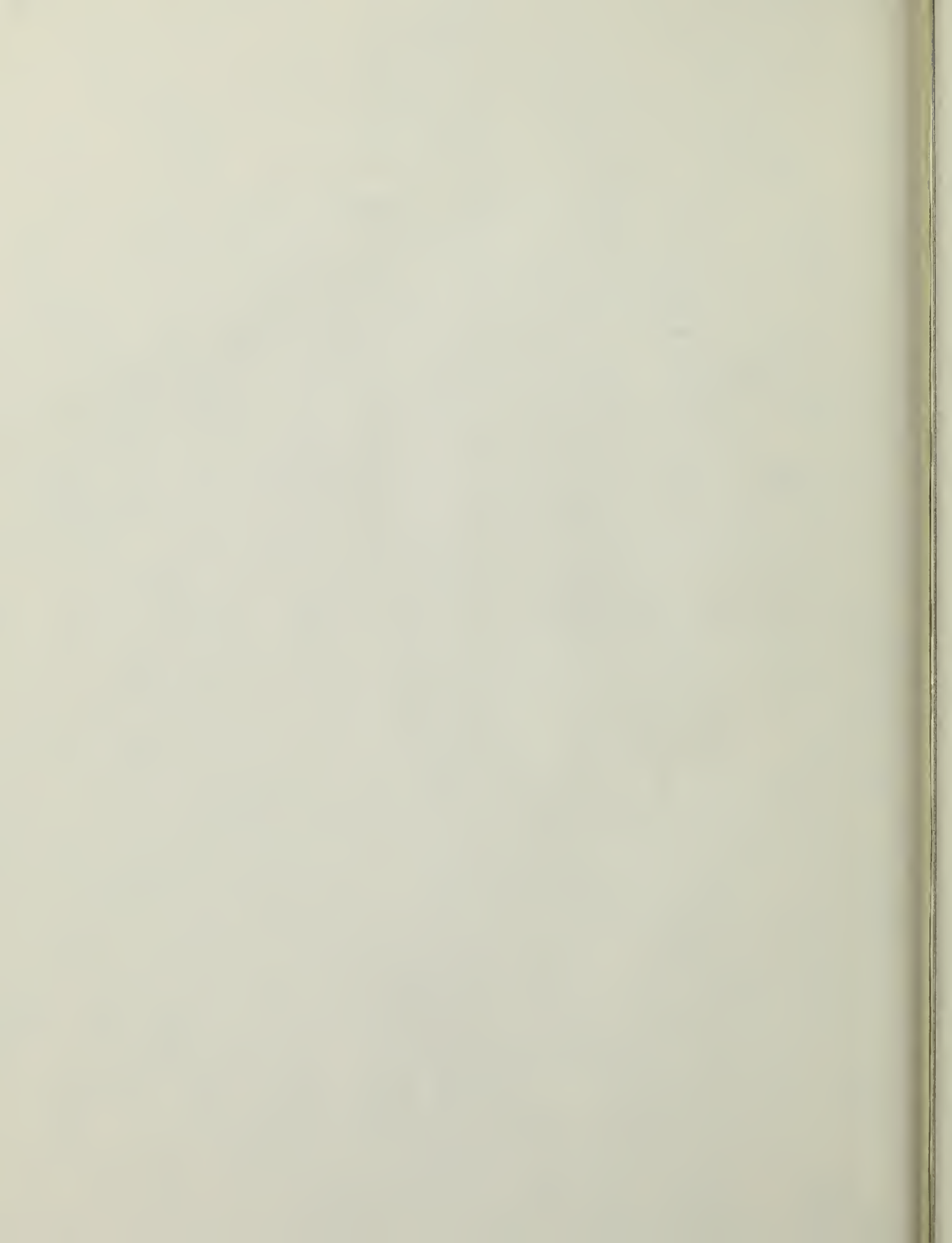
and

Revenue Analysis and Forecasting (MRAF)

Model Forecasts

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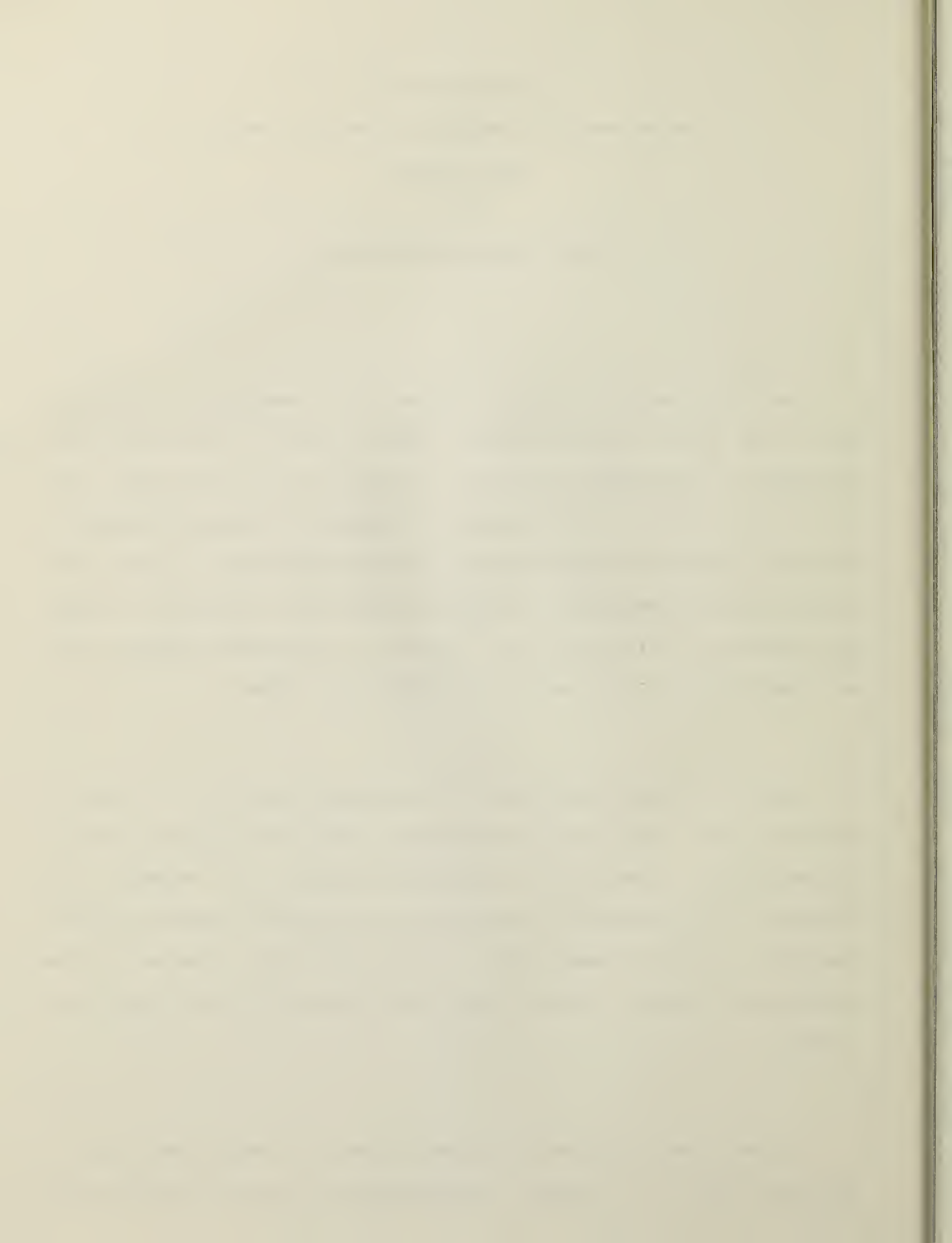


The January 1983
Massachusetts Economic Policy Analysis (MEPA)
Model Forecast
by
George Treyz and Roy Williams

The latest available estimates of Massachusetts manufacturing employment have shown sharp drops over the last several quarters. Total manufacturing employment is now forecast to dip almost as much as it did in 1974-1975. This is partially due to the very extended delay of the expected recovery in productive equipment investment sectors in which Massachusetts is more than proportionately represented. Although non-manufacturing employment is holding up comparatively well at this point, the drop in manufacturing employment will be a restraining influence on the non-manufacturing sectors.

Massachusetts has shared fully in the dramatic drop in the national inflation rate. This drop should mean that both the U.S. and Massachusetts economies may be poised for a non-inflationary recovery. The recovery would presumably be restrained by monetary policy if it were to become too robust. Therefore, a long slow upswing with a barely noticeable reduction in the unemployment rate for the next year or two is probably the best that can be expected.

The following tables show the control forecast for Massachusetts based on the latest DRI U.S. forecast. The Massachusetts forecast shows increasing



total employment starting in the second quarter of 1983 and increasing manufacturing employment starting in the fourth quarter of 1983. The unemployment rate peaks in the second quarter of 1983 at 8.3% (with large variation in the monthly reported estimates to be expected). The Massachusetts unemployment rate then drops slowly to a rate of 6.7% by the end of 1984. Rather surprisingly, real per-capita disposable income has grown at about two percent per year despite the lack-lustre economy. This is the joint result of good inflation performance and tax cuts that offset the poor employment showing. We expect this income growth to continue at about the same rate.

JANUARY CONTROL FORECAST

(T5)

SUMMARY REPORT

MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Units as Indicated)

	1980	1981	1982	1983	1984	1985
Employment--Total Nonag.*	2652	2654	2614	2609	2673	2743
% Change	1.9	.1	-1.5	-.2	2.5	2.6
Manufacturing*	675	667	629	597	609	625
% Change	.4	-1.2	-5.6	-5.1	2.0	2.6
Non-Manufacturing*	1977	1987	1985	2012	2064	2118
% Change	2.4	.5	-.1	1.4	2.6	2.6
Unemployment Rate	5.6	6.3	7.9	8.1	7.2	6.2
Employment Rate Index**	106.3	105.1	102.3	101.1	102.9	104.8
% Change	1.0	-1.1	-2.7	-1.1	1.7	1.9
Relative to U.S. Index**	102.7	102.2	102.3	102.5	102.1	101.7
Rate of Wage Change	8.4	8.5	7.7	6.4	6.3	5.8
Wage Index Rel. to U.S.**	93.3	92.9	93.7	94.0	94.3	94.5
Avg. Weekly Hours in Mfg.	39.8	40.1	39.4	39.7	40.2	40.3
Rate of Price Inflation	12.7	11.1	4.2	6.2	6.0	6.1
Relative to U.S. CPI**	96.0	96.7	94.9	95.8	96.2	96.4
Personal Income (mil\$)	57733	64248	68924	73894	80634	87421
% Change	12.0	11.3	7.3	7.2	9.1	8.4
Disposable Income (mil\$)	48144	53174	57443	62047	67894	73514
% Change	11.5	10.4	8.0	8.0	9.4	8.3
Real Per Cap. D.I. Index**	103.4	102.2	105.3	106.5	109.2	110.9
Relative to U.S.**	102.8	101.8	104.9	104.1	103.6	102.8
Rel. Business Cost Index**	96.0	95.6	95.9	96.4	96.6	96.7
Manufacturing**	95.8	94.9	95.0	95.5	95.7	95.7
Non-Manufacturing**	96.0	95.9	96.3	96.9	97.1	97.1

*Thousands of people.

**Indexes equal 100 in calendar 1973.

JANUARY CONTROL FORECAST

(T5)

EMPLOYMENT IN MASSACHUSETTS--INDUSTRY DETAIL
(Thousands of People)

	1980	1981	1982	1983	1984	1985
Manufacturing	674.9	666.8	629.2	597.1	608.8	624.8
As % of U.S.	3.33	3.31	3.34	3.30	3.25	3.22
Durables	411.4	410.0	387.0	360.0	368.4	381.2
Lumber, Furntr. (24/25)	13.3	13.1	11.6	11.3	11.5	11.7
Stone, Clay, etc. (32)	13.1	12.7	11.9	11.3	11.7	12.1
Primary Metals (33)	17.5	17.1	15.1	14.2	15.7	16.7
Fabricated Metals (34)	53.4	51.0	46.7	42.4	42.2	43.3
Non-elec. Machin. (35)	109.6	110.0	105.1	95.1	97.0	102.7
Elec. Equipment (36)	110.5	111.3	109.5	104.8	106.8	108.3
Transport. Equip. (37)	35.4	33.4	30.5	27.1	27.9	29.3
Instruments (38)	58.6	61.3	56.7	53.8	55.4	57.0
Nondurables	263.5	256.9	242.2	237.0	240.5	243.6
Food (20)	27.4	25.2	25.4	25.3	25.4	25.1
Textiles (22)	25.6	24.5	21.2	20.4	20.3	20.3
Apparel (23)	39.8	39.3	36.2	36.5	37.5	38.1
Paper (26)	28.2	27.1	25.9	25.5	25.6	25.5
Printing (27)	44.1	44.9	43.7	42.6	42.9	43.3
Chemicals (28)	18.4	18.4	17.7	17.6	17.9	18.3
Rubber (30)	30.6	29.1	28.0	27.3	28.5	29.9
Leather (31)	21.4	20.7	18.5	17.2	17.1	17.0
Other Nondurables (39)	28.0	27.6	25.6	24.5	25.2	25.9
Nonmanufacturing	1977.5	1987.1	1984.7	2011.5	2064.4	2117.7
Contract Construction	77.6	78.5	79.4	80.6	85.9	92.7
Transport & Utilities	121.6	119.8	117.5	115.4	115.1	115.4
Wholesale & Retail Trade	574.4	575.0	578.2	574.8	589.8	603.9
Finance, Insurance, etc.	159.0	164.0	167.6	169.3	175.4	181.5
Services & Miscellaneous	634.4	663.6	675.6	698.6	719.8	740.1
Government	410.4	386.4	366.2	372.8	378.4	384.1
Federal	58.3	57.4	55.8	56.3	58.2	60.1
State	97.8	96.8	94.7	95.8	95.5	95.9
Local	254.3	232.2	215.7	220.7	224.7	228.1
Nonag. Wage & Sal. Employ.*	2652.4	2653.9	2613.9	2608.6	2673.3	2742.5
As % of U.S.	2.93	2.91	2.92	2.91	2.89	2.87

*Establishment basis (CES Survey).

JANUARY CONTROL FORECAST

(T5)

MASSACHUSETTS EMPLOYMENT, POPULATION, AND LABOR FORCE
(Thousands of People)

	1980	1981	1982	1983	1984	1985
Nonag. Wage & Sal. Employ.*	2652.4	2653.9	2613.9	2608.6	2673.3	2742.5
As % of U.S.	2.93	2.91	2.92	2.91	2.89	2.87
Plus: All Other Nonag.	163.8	162.7	171.9	175.7	180.4	185.3
Plus: Agriculture	27.5	25.9	25.7	25.5	25.5	25.5
Total Mass. Jobs	2843.7	2842.5	2811.6	2809.8	2879.1	2953.4
Less: Adjustments**	130.0	70.1	26.8	18.6	18.6	18.6
Total Employment***	2713.7	2772.3	2784.8	2791.2	2860.5	2934.8
As % of U.S.	2.73	2.76	2.80	2.79	2.78	2.76
Mass. Population	5740.0	5773.0	5809.5	5847.0	5880.8	5913.1
As % of U.S.	2.52	2.51	2.50	2.50	2.49	2.48
Mass. Populn. 16 and Over	4386.6	4437.7	4491.7	4532.4	4565.8	4597.8
Mass. Employment Rate****	60.5	59.8	58.2	57.6	58.5	59.6
Indexed to 1973	106.3	105.1	102.3	101.1	102.9	104.8
U.S. Employment Rate	53.2	52.9	51.4	50.8	51.8	53.0
Mass. Index Rel. To U.S.	102.7	102.2	102.3	102.5	102.1	101.7
Labor Force	2875.2	2960.4	3023.5	3038.6	3082.6	3127.5
Participation Rate	65.5	66.7	67.3	67.0	67.5	68.0
U.S. Participation Rate	63.0	63.1	63.2	63.4	63.9	64.4
Number of Unemployed	161.5	188.1	238.7	247.3	222.0	192.8
Unemployment Rate	5.6	6.3	7.9	8.1	7.2	6.2
<u>U.S. Unemployment Rate</u>	<u>7.2</u>	<u>7.7</u>	<u>9.8</u>	<u>10.7</u>	<u>9.6</u>	<u>8.5</u>

*Establishment basis (CES Survey).

**Adjustments for double counting and place of residence.

***Household basis (Current Population Survey).

****Total nonag. employment divided by the population sixteen and over.

JANUARY CONTROL FORECAST

(T5)

MANUFACTURING EMPLOYMENT IN MASSACHUSETTS

(Thousands of People)

	1980	1981	1982	1983	1984	1985
Manufacturing	674.9	666.8	629.2	597.1	608.8	624.8
As % of U.S.	3.33	3.31	3.34	3.30	3.25	3.22
Durables	411.4	410.0	387.0	360.0	368.4	381.2
Lumber, Furniture (24/25)	13.3	13.1	11.6	11.3	11.5	11.7
Stone, Clay, Glass (32)	13.1	12.7	11.9	11.3	11.7	12.1
Primary Metals (33)	17.5	17.1	15.1	14.2	15.7	16.7
Fabricated Metals (34)	53.4	51.0	46.7	42.4	42.2	43.3
Non-elec. Machin. (35)	109.6	110.0	105.1	95.1	97.0	102.7
Engines & Turbines (351)	6.5	6.3	5.8	5.4	5.9	6.5
Metalworking Mach. (354)	17.7	17.0	14.4	11.2	11.0	11.3
Spec. Industry M. (355)	16.9	16.2	14.0	11.7	11.5	11.7
Gen. Industrial M. (356)	9.7	9.0	8.4	7.3	7.3	7.7
Off. & Comput. M. (357)	46.2	49.4	51.2	49.3	50.5	53.9
Rest of Industry	12.6	12.0	11.4	10.3	10.7	11.6
Elec. Equipment (36)	110.5	111.3	109.5	104.8	106.8	108.3
Electronic Compon. (367)	48.9	49.9	51.4	50.4	53.2	55.1
Rest of Industry	61.7	61.4	58.0	54.4	53.6	53.2
Transport. Equip. (37)	35.4	33.4	30.5	27.1	27.9	29.3
Mot. Vehicles & P. (371)	6.3	5.8	5.5	5.6	6.0	6.4
Aircraft & Parts (372)	10.6	10.4	9.8	8.4	8.5	9.0
Rest of Industry	18.5	17.3	15.2	13.2	13.5	14.0
Instruments (38)	58.6	61.3	56.7	53.8	55.4	57.0
Meas. & Control (382)	20.3	23.0	21.5	20.5	21.4	22.3
Rest of Industry	38.3	38.3	35.2	33.3	34.0	34.7
Nondurables	263.5	256.9	242.2	237.0	240.5	243.6
Food (20)	27.4	25.2	25.4	25.3	25.4	25.1
Textiles (22)	25.6	24.5	21.2	20.4	20.3	20.3
Apparel (23)	39.8	39.3	36.2	36.5	37.5	38.1
Paper (26)	28.2	27.1	25.9	25.5	25.6	25.5
Printing (27)	44.1	44.9	43.7	42.6	42.9	43.3
Chemicals (28)	18.4	18.4	17.7	17.6	17.9	18.3
Synthet. Materials (282)	5.7	5.5	5.2	5.4	5.6	5.8
Rest of Industry	12.7	12.9	12.5	12.2	12.3	12.5
Rubber (30)	30.6	29.1	28.0	27.3	28.5	29.9
Leather (31)	21.4	20.7	18.5	17.2	17.1	17.0
Other Nondurables (39)	28.0	27.6	25.6	24.5	25.2	25.9

JANUARY CONTROL FORECAST

(T5)

EMPLOYMENT IN MASSACHUSETTS AS A PER CENT OF U.S. EMPLOYMENT

	1980	1981	1982	1983	1984	1985
Durables	3.38	3.38	3.48	3.46	3.41	3.37
Lumber (24)	.75	.79	.77	.76	.75	.74
Furniture (25)	1.74	1.66	1.56	1.51	1.49	1.47
Stone, Clay, Glass (32)	1.98	2.00	2.05	2.01	1.98	1.95
Primary Metals (33)	1.53	1.53	1.64	1.67	1.66	1.65
Fabricated Metals (34)	3.31	3.20	3.23	3.19	3.13	3.07
Non-elec. Machin. (35)	4.39	4.39	4.59	4.73	4.62	4.53
Engines & Turbines (351)	4.82	4.75	5.04	5.27	5.22	5.14
Metalworking Mach. (354)	4.75	4.66	4.46	4.09	3.88	3.68
Spec. Industry M. (355)	8.15	8.15	7.85	7.69	7.31	6.94
Gen. Industrial M. (356)	2.98	2.80	2.97	3.09	3.03	2.97
Off. & Comput. M. (357)	10.69	10.66	10.53	10.77	10.71	10.63
Rest of Industry Group	1.23	1.17	1.26	1.30	1.29	1.29
Elec. Equipment (36)	5.29	5.32	5.44	5.46	5.45	5.39
Electronic Compon. (367)	8.82	8.93	9.08	9.24	9.23	9.17
Rest of Industry Group	4.01	4.00	4.01	3.96	3.88	3.78
Transport. Equip. (37)	1.86	1.77	1.77	1.68	1.65	1.65
Mot. Vehicles & P. (371)	.80	.74	.83	.83	.84	.86
Aircraft & Parts (372)	1.62	1.60	1.57	1.53	1.53	1.55
Rest of Industry Group	4.03	3.77	3.52	3.27	3.16	3.07
Instruments (38)	8.24	8.44	8.03	7.96	8.12	8.16
Meas. & Control (382)	8.26	8.94	8.72	8.64	8.90	9.02
Rest of Industry Group	8.22	8.16	7.65	7.60	7.70	7.69
Nondurables	3.25	3.19	3.13	3.07	3.04	3.01
Food (20)	1.60	1.51	1.54	1.52	1.50	1.47
Textiles (22)	3.01	2.98	2.83	2.75	2.67	2.60
Apparel (23)	3.15	3.16	3.12	3.14	3.11	3.07
Paper (26)	4.07	3.94	3.93	3.86	3.79	3.71
Printing (27)	3.52	3.55	3.44	3.34	3.29	3.24
Chemicals (28)	1.66	1.66	1.65	1.67	1.67	1.67
Synthet. Materials (282)	2.80	2.84	2.83	2.86	2.87	2.87
Rest of Industry Group	1.40	1.41	1.41	1.41	1.40	1.40
Rubber (30)	4.21	3.96	4.02	4.05	4.07	4.09
Leather (31)	9.20	8.89	8.79	8.51	8.29	8.14
Other Nondurables (39)	6.71	6.71	6.61	6.63	6.63	6.61
Nonmanufacturing	2.86	2.85	2.85	2.86	2.84	2.82
Contract Construction	1.78	1.88	2.03	2.07	2.09	2.10
Transport & Utilities	2.36	2.32	2.32	2.31	2.28	2.25
Wholesale & Retail Trade	2.83	2.80	2.81	2.78	2.76	2.73
Finance, Insurance, etc.	3.08	3.09	3.13	3.09	3.06	3.02
Services & Miscellaneous	3.55	3.57	3.56	3.59	3.57	3.53
Government	2.53	2.41	2.32	2.34	2.34	2.34
Federal	2.04	2.07	2.04	2.04	2.04	2.04
State & Local	2.63	2.48	2.38	2.40	2.41	2.41

JANUARY CONTROL FORECAST (T5)

PERSONAL INCOME IN MASSACHUSETTS
(Millions of Dollars)

	1980	1981	1982	1983	1984	1985
INCOME BY PLACE OF WORK						
Wage & Sal. Disbursements	36939	40435	42859	45389	49581	53934
Other Labor Income	3475	3823	4280	4753	5393	6111
Proprietors' Income	2376	2468	2552	2884	3222	3509
Total Labor & Propr. Inc.	42790	46726	49692	53025	58196	63553
Breakdown by Industry:						
Farm	109	117	101	101	106	112
Manufacturing	12670	13834	14179	14555	16063	17651
Durables	8874	9791	10028	10109	11222	12421
Nondurables	3796	4043	4151	4446	4842	5229
Construction	1663	1820	2166	2410	2735	3111
Trade	6788	7320	7658	8150	8926	9701
Finance, Ins., & R.E.	2737	3059	3381	3648	4031	4431
Transportation & Util.	2778	3027	3241	3413	3660	3927
Services & Misc.	9726	10978	12203	13483	14846	16193
Government	6320	6572	6762	7266	7830	8428
Federal	1472	1607	1671	1763	1895	2054
State & Local	4848	4965	5090	5503	5935	6374

DERIVATION OF PERSONAL INCOME BY PLACE OF RESIDENCE

Total L&P, Place of Work	42790	46726	49692	53025	58196	63553
Less: Soc. Insr. Contr.	2272	2662	2899	3107	3561	3992
Plus: Residence Adjmt.	-280	-312	-350	-380	-408	-436
Plus: Div., Int., & Rent	9155	11073	12340	13162	14535	15783
Plus: Transfer Payments	8340	9424	10142	11194	11871	12512
State Unempl. Benefits	332	354	453	497	474	436
All Other Transfers	8008	9070	9690	10697	11397	12077
Personal Inc., Pl of Res.	57733	64248	68924	73894	80634	87421
Less: Fed. Income Tax	6921	8011	8149	8295	8803	9597
Less: Mass. Income Tax	1975	2227	2412	2556	2838	3116
Less: Other Mass. Taxes	693	836	920	995	1099	1194
Dispos. P.I., Pl of Res.	48144	53174	57443	62047	67894	73514
Boston CPI, 1967 = 100	240.0	266.6	277.8	294.9	312.7	331.8
Real D.P.I., '67 Dollars	20063	19943	20681	21038	21710	22158
Real D.P.I., Per Capita	3.495	3.455	3.560	3.598	3.692	3.747
% Change	-1.0	-1.2	3.1	1.1	2.6	1.5



JANUARY CONTROL FORECAST

(T5)

SUMMARY REPORT

MASSACHUSETTS EARNED FAMILY INCOME DISTRIBUTION MODEL
OF ANNUALIZED WORKING-PERIOD EARNINGS

	1980	1981	1982	1983	1984	1985
Per Cent of Families with Female Head						
	17.50	18.15	18.79	19.43	20.06	20.69
Per Cent of Named Group without Earnings						
All Families	9.16	9.64	10.44	10.71	10.33	9.91
Male Headed Fams.	4.83	5.02	5.40	5.46	5.24	4.98
Female Headed Fams.	29.61	30.47	32.20	32.48	30.63	28.80
No. of Families (000)						
With Earnings	1194.8	1207.5	1209.8	1209.3	1206.2	1201.2
Without Earnings	1085.3	1091.1	1083.5	1079.8	1081.6	1082.1
	109.5	116.4	126.2	129.5	124.6	119.0
Average Earnings of All Families						
In Nominal Dollars	27960	30282	32038	33943	37173	40607
In 1972 Dollars	14809	14437	14662	14629	15107	15555
Average Earnings of Those with Earnings						
In Nominal Dollars	30781	33514	35771	38012	41455	45071
In 1972 Dollars	16303	15977	16371	16383	16848	17266
Total Earnings (mil \$)	33405	36566	38759	41046	44837	48773
Displaced Log-Normal Parameters (Families with Earnings)						
Gini Coefficient	.3253	.3276	.3344	.3428	.3445	.3451
Displacement	.4770	.5197	.6072	.6209	.5693	.5098
Standard Deviation	.3945	.3862	.3723	.3785	.3932	.4099
Mean -- Nom. \$ Dist.	10.65	10.76	10.89	10.96	11.01	11.04
Mean -- 1972 \$ Dist.	10.01	10.02	10.11	10.12	10.11	10.08

EXPLANATORY VARIABLES

Population 18 thru 64	3512.7	3581.8	3620.8	3652.1	3676.1	3694.4
Tot. Nonag. Employment	2652.4	2653.9	2613.9	2608.6	2673.3	2742.5
M & R Emp. (% of Tot.)	30.03	29.64	28.57	27.31	27.08	26.99
Female Employment	1096.1	1107.6	1100.3	1106.7	1134.9	1163.1
As % of Popul. 18-64	31.20	30.92	30.39	30.30	30.87	31.48
Unemployment Rate	5.6	6.3	7.9	8.1	7.2	6.2
Wage/Sal Disbursements	36939	40435	42859	45389	49581	53934
WSD per Employee	13.926	15.237	16.398	17.398	18.544	19.664
Wage Acceleration	NA	NA	NA	NA	NA	NA
C.P.I. (Boston)	240.0	266.6	277.8	294.9	312.7	331.8

JANUARY CONTROL FORECAST (T5)

PER CENT OF MASSACHUSETTS FAMILIES
WITH EARNED FAMILY INCOME IN GIVEN NOMINAL DOLLAR CLASSES
(MEFID MODEL OF ANNUALIZED WORKING-PERIOD EARNINGS)

	1980	1981	1982	1983	1984	1985
EARNINGS CLASS: (Nominal Dollars)						
\$0	9.16	9.64	10.44	10.71	10.33	9.91
1 and over	90.84	90.36	89.56	89.29	89.67	90.09
\$1 - 999	.56	.66	.94	1.13	1.02	.87
1000 - 1999	.30	.30	.33	.35	.30	.26
2000 - 2999	.41	.38	.40	.41	.36	.31
3000 - 3999	.53	.48	.49	.49	.43	.37
4000 - 4999	.66	.59	.58	.57	.50	.43
5000 - 5999	.81	.70	.67	.65	.57	.49
6000 - 6999	.96	.82	.77	.73	.64	.55
7000 - 7999	1.11	.95	.87	.82	.71	.62
8000 - 8999	1.27	1.08	.97	.91	.79	.68
9000 - 9999	1.42	1.20	1.07	.99	.86	.75
10000 - 10999	1.57	1.32	1.17	1.08	.94	.82
11000 - 11999	1.71	1.44	1.26	1.16	1.01	.88
12000 - 12999	1.84	1.55	1.35	1.24	1.08	.95
13000 - 13999	1.95	1.65	1.44	1.31	1.15	1.01
14000 - 14999	2.05	1.75	1.52	1.38	1.21	1.07
15000 - 19999	11.28	9.79	8.56	7.75	6.89	6.15
20000 - 24999	11.71	10.58	9.45	8.62	7.81	7.10
25000 - 34999	20.15	19.49	18.30	17.12	16.10	15.11
35000 - 49999	18.02	19.44	19.95	19.84	19.96	19.82
50000 and over	12.52	16.18	19.48	22.76	27.33	31.85
20000 and over	62.40	65.70	67.19	68.34	71.20	73.88
\$0 - 1000	9.73	10.30	11.37	11.84	11.35	10.78
0 - 2000	10.03	10.59	11.70	12.18	11.66	11.04
0 - 4000	10.97	11.45	12.60	13.09	12.45	11.72
0 - 6000	12.44	12.75	13.84	14.30	13.51	12.63
0 - 9000	15.78	15.59	16.44	16.76	15.65	14.48
0 - 12000	20.48	19.56	19.94	19.99	18.47	16.94
0 - 15000	26.32	24.51	24.25	23.91	21.91	19.97
0 - 20000	37.60	34.30	32.81	31.66	28.80	26.12
0 - 25000	49.31	44.88	42.26	40.28	36.61	33.22
0 - 35000	69.47	64.38	60.57	57.40	52.72	48.34
0 - 50000	87.48	83.82	80.52	77.24	72.67	68.15

JANUARY CONTROL FORECAST

(T5)

SUMMARY REPORT

MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Seasonally Adjusted Annual Rates, Units as Indicated)

	1981:3	1981:4	1982:1	1982:2	1982:3	1982:4
Employment--Total Nonag.*	2641	2653	2635	2615	2602	2604
% Change	-2.5	1.7	-2.6	-3.1	-2.0	.4
Manufacturing*	664	665	648	639	622	609
% Change	-3.6	.2	-9.9	-5.4	-10.1	-8.0
Non-Manufacturing*	1977	1988	1988	1976	1980	1995
% Change	-2.1	2.3	-.1	-2.3	.7	3.2
Unemployment Rate	6.6	7.2	7.3	8.7	8.0	7.5
Employment Rate Index**	104.5	104.6	103.5	102.4	101.7	101.5
% Change	-3.6	.5	-4.1	-4.1	-3.0	-.7
Relative to U.S. Index**	101.5	102.4	102.3	102.0	102.2	102.9
Rate of Wage Change	10.5	6.5	6.2	10.7	6.7	3.6
Wage Index Rel. to U.S.**	93.3	93.1	93.0	94.0	94.0	93.9
Avg. Weekly Hours in Mfg.	40.0	40.1	39.6	39.7	39.0	39.4
Rate of Price Inflation	8.9	6.1	-2.4	1.8	12.2	5.7
Relative to U.S. CPI**	96.4	96.0	94.7	94.1	95.1	95.6
Personal Income (mil\$)	65478	66797	67377	68679	69195	70446
% Change	15.1	8.3	3.5	8.0	3.0	7.4
Disposable Income (mil\$)	54046	55430	55970	57040	57846	58918
% Change	14.5	10.6	3.9	7.9	5.8	7.6
Real Per Cap. D.I. Index**	102.7	103.6	105.1	106.5	104.8	105.1
Relative to U.S.**	102.2	103.3	104.9	106.0	104.3	104.5
Rel. Business Cost Index**	95.6	95.4	95.3	95.8	96.1	96.3
Manufacturing**	94.5	94.2	94.4	94.7	95.4	95.4
<u>Non-Manufacturing**</u>	96.1	96.0	95.6	96.3	96.4	96.8

*Thousands of people.

**Indexes equal 100 in calendar 1973.

JANUARY CONTROL FORECAST

(T5)

SUMMARY REPORT

MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Seasonally Adjusted Annual Rates, Units as Indicated)

	1983:1	1983:2	1983:3	1983:4	1984:1	1984:2
Employment—Total Nonag.*	2596	2600	2611	2627	2645	2665
% Change	-1.3	.6	1.8	2.5	2.7	2.9
Manufacturing*	600	596	595	598	602	607
% Change	-5.8	-2.9	-.3	1.8	2.9	3.2
Non-Manufacturing*	1996	2004	2016	2030	2043	2058
% Change	.1	1.7	2.4	2.7	2.7	2.9
Unemployment Rate	8.2	8.3	8.1	7.9	7.7	7.3
Employment Rate Index**	100.9	100.9	101.2	101.6	102.1	102.7
% Change	-2.2	-.1	1.0	1.8	2.0	2.2
Relative to U.S. Index**	102.6	102.5	102.4	102.3	102.3	102.2
Rate of Wage Change	6.0	7.3	7.4	6.8	5.6	6.1
Wage Index Rel. to U.S.**	93.9	94.0	94.0	94.1	94.3	94.3
Avg. Weekly Hours in Mfg.	39.5	39.7	39.8	40.0	40.1	40.2
Rate of Price Inflation	5.6	5.4	5.6	5.9	7.0	6.0
Relative to U.S. CPI**	95.8	95.8	95.8	95.9	96.0	96.1
Personal Income (mil\$)	71575	72904	74567	76531	77993	79774
% Change	6.6	7.6	9.4	11.0	7.9	9.5
Disposable Income (mil\$)	59858	61005	62827	64497	65812	67226
% Change	6.5	7.9	12.5	11.1	8.4	8.9
Real Per Cap. D.I. Index**	105.1	105.5	107.1	108.2	108.4	109.0
Relative to U.S.**	104.2	104.2	104.1	103.9	103.8	103.7
Rel. Business Cost Index**	96.4	96.4	96.5	96.5	96.6	96.6
Manufacturing**	95.5	95.5	95.6	95.6	95.7	95.7
Non-Manufacturing**	96.8	96.8	96.9	97.0	97.0	97.1

*Thousands of people.

**Indexes equal 100 in calendar 1973.

ANNUARY CONTROL FORECAST

(T5)

MANUFACTURING EMPLOYMENT IN MASSACHUSETTS
(Thousands of People, Seasonally Adjusted)

	1982:1	1982:2	1982:3	1982:4	1983:1	1983:2
Manufacturing	647.5	638.7	621.8	608.9	600.0	595.5
As % of U.S.	3.33	3.35	3.33	3.33	3.32	3.30
Durables	398.2	393.8	384.1	371.9	363.8	358.9
Lumber, Furniture (24/25)	12.0	11.8	11.3	11.3	11.3	11.3
Stone, Clay, Glass (32)	12.3	12.2	11.7	11.3	11.2	11.2
Primary Metals (33)	16.3	15.6	14.7	13.7	13.7	14.0
Fabricated Metals (34)	49.3	47.5	45.5	44.3	43.2	42.4
Non-elec. Machin. (35)	107.6	105.2	105.3	102.4	98.0	94.8
Engines & Turbines (351)	6.1	5.6	5.9	5.6	5.4	5.3
Metalworking Mach. (354)	16.1	14.7	14.0	12.7	11.9	11.2
Spec. Industry M. (355)	15.0	14.3	13.5	13.1	12.3	11.7
Gen. Industrial M. (356)	8.7	8.1	8.6	7.9	7.5	7.2
Off. & Comput. M. (357)	50.0	50.9	51.7	52.4	50.6	49.1
Rest of Industry	11.8	11.5	11.5	10.7	10.3	10.3
Elec. Equipment (36)	111.0	111.2	108.8	106.9	105.4	104.5
Electronic Compon. (367)	51.7	52.0	51.2	50.9	50.1	50.0
Rest of Industry	59.3	59.2	57.6	56.0	55.3	54.5
Transport. Equip. (37)	30.7	32.1	31.3	28.0	27.3	27.0
Mot. Vehicles & P. (371)	5.1	5.7	6.1	5.2	5.4	5.5
Aircraft & Parts (372)	10.3	10.3	9.3	9.4	8.7	8.4
Rest of Industry	15.3	16.2	15.9	13.4	13.2	13.1
Instruments (38)	59.0	58.2	55.5	54.0	53.7	53.6
Meas. & Control (382)	22.3	22.2	20.8	20.5	20.4	20.4
Rest of Industry	36.7	35.9	34.7	33.5	33.3	33.2
Nondurables	249.4	244.8	237.7	237.0	236.2	236.6
Food (20)	25.6	25.3	25.2	25.4	25.3	25.3
Textiles (22)	22.3	21.6	20.4	20.4	20.4	20.4
Apparel (23)	37.7	37.2	34.1	35.9	36.1	36.4
Paper (26)	26.3	26.1	25.8	25.5	25.4	25.5
Printing (27)	45.2	43.7	43.2	42.7	42.5	42.5
Chemicals (28)	18.2	17.8	17.6	17.5	17.5	17.6
Synthet. Materials (282)	5.4	5.2	5.0	5.3	5.3	5.4
Rest of Industry	12.7	12.5	12.5	12.3	12.2	12.2
Rubber (30)	28.6	28.3	27.8	27.3	27.1	27.1
Leather (31)	19.1	19.0	18.2	17.5	17.4	17.3
Other Nondurables (39)	26.5	25.8	25.5	24.8	24.6	24.4

JANUARY CONTROL FORECAST

(T5)

MASSACHUSETTS EMPLOYMENT, POPULATION, AND LABOR FORCE
(Thousands of People, Seasonally Adjusted)

	1982:1	1982:2	1982:3	1982:4	1983:1	1983:2
Nonag. Wage & Sal. Employ.*	2635.2	2614.9	2601.5	2604.1	2595.8	2599.9
As % of U.S.	2.91	2.90	2.91	2.93	2.92	2.91
Plus: All Other Nonag.	166.2	170.6	175.2	175.5	174.9	175.2
Plus: Agriculture	25.6	26.2	25.5	25.5	25.5	25.5
Total Mass. Jobs	2827.1	2811.8	2802.2	2805.2	2796.2	2800.6
Less: Adjustments**	59.8	55.5	-26.8	18.6	18.6	18.6
Total Employment***	2767.3	2756.3	2829.0	2786.6	2777.6	2782.0
As % of U.S.	2.78	2.76	2.83	2.82	2.81	2.79
Mass. Population	5796.0	5805.0	5814.0	5823.2	5835.2	5842.4
As % of U.S.	2.51	2.51	2.50	2.50	2.50	2.50
Mass. Populn. 16 and Over	4474.0	4486.0	4497.3	4509.7	4520.0	4528.4
Mass. Employment Rate****	58.9	58.3	57.8	57.7	57.4	57.4
Indexed to 1973	103.5	102.4	101.7	101.5	100.9	100.9
U.S. Employment Rate	52.1	51.7	51.1	50.7	50.6	50.6
Mass. Index Rel. To U.S.	102.3	102.0	102.2	102.9	102.6	102.5
Labor Force	2986.7	3017.3	3075.8	3014.0	3026.0	3034.0
Participation Rate	66.8	67.3	68.4	66.8	66.9	67.0
U.S. Participation Rate	62.8	63.2	63.4	63.2	63.3	63.4
Number of Unemployed	219.4	261.0	246.8	227.4	248.4	252.1
Unemployment Rate	7.3	8.7	8.0	7.5	8.2	8.3
<u>U.S. Unemployment Rate</u>	8.8	9.5	9.9	10.8	11.1	10.8

*Establishment basis (CES Survey).

**Adjustments for double counting and place of residence.

***Household basis (Current Population Survey).

****Total nonag. employment divided by the population sixteen and over.

JANUARY CONTROL FORECAST (T5)

SUMMARY REPORT
MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL
(Units as Indicated)

	1975	1982	1985	1995	2007
Employment—Total Nonag.*	2269	2614	2743	3006	3263
% Change	NA	2.0	1.6	.9	.7
Manufacturing*	578	629	625	653	638
% Change	NA	1.2	-.2	.4	-.2
Non-Manufacturing*	1691	1985	2118	2353	2625
% Change	NA	2.3	2.2	1.1	.9
Unemployment Rate	11.2	7.9	6.2	6.1	6.2
Employment Rate Index**	95.3	102.3	104.8	113.6	116.3
% Change	NA	1.0	.8	.8	.2
Relative to U.S. Index**	98.8	102.3	101.7	99.5	99.2
Rate of Wage Change	NA	7.2	6.2	8.0	7.0
Wage Index Rel. to U.S.**	98.3	93.7	94.5	93.4	92.8
Avg. Weekly Hours in Mfg.	39.2	39.4	40.3	40.4	40.5
Rate of Price Inflation	NA	8.0	6.1	7.2	6.3
Relative to U.S. CPI**	99.3	94.9	96.4	96.6	96.4
Personal Income (mil\$)	35789	68924	87421	205329	504296
% Change	NA	9.8	8.2	8.9	7.8
Disposable Income (mil\$)	30867	57443	73514	171141	418694
% Change	NA	9.3	8.6	8.8	7.7
Real Per Cap. D.I. Index**	97.8	105.3	110.9	125.3	143.0
Relative to U.S.**	100.2	104.9	102.8	101.3	101.9
Rel. Business Cost Index**	99.5	95.9	96.7	96.3	95.8
Manufacturing**	98.9	95.0	95.7	95.4	95.0
<u>Non-Manufacturing**</u>	99.8	96.3	97.1	96.7	96.2

*Thousands of people.

**Indexes equal 100 in calendar 1973.

JANUARY CONTROL FORECAST

(T5)

EMPLOYMENT IN MASSACHUSETTS--INDUSTRY DETAIL
(Thousands of People)

	1975	1982	1985	1995	2007
Manufacturing	577.8	629.2	624.8	652.8	638.3
As % of U.S.	3.15	3.34	3.22	3.02	2.95
Durables	319.0	387.0	381.2	437.2	455.8
Lumber, Furntr. (24/25)	12.8	11.6	11.7	11.0	9.2
Stone, Clay, etc. (32)	10.9	11.9	12.1	10.5	7.9
Primary Metals (33)	15.5	15.1	16.7	16.5	15.3
Fabricated Metals (34)	49.3	46.7	43.3	44.3	34.8
Non-elec. Machin. (35)	74.0	105.1	102.7	137.7	164.8
Elec. Equipment (36)	82.8	109.5	108.3	125.2	134.8
Transport. Equip. (37)	30.0	30.5	29.3	29.3	25.4
Instruments (38)	43.7	56.7	57.0	62.6	63.7
Nondurables	258.7	242.2	243.6	215.7	182.4
Food (20)	28.5	25.4	25.1	19.4	14.9
Textiles (22)	25.2	21.2	20.3	15.0	10.7
Apparel (23)	41.2	36.2	38.1	29.5	23.1
Paper (26)	27.9	25.9	25.5	22.1	18.4
Printing (27)	40.3	43.7	43.3	41.6	41.1
Chemicals (28)	19.8	17.7	18.3	20.5	21.7
Rubber (30)	27.8	28.0	29.9	30.5	24.3
Leather (31)	22.9	18.5	17.0	13.0	7.2
Other Nondurables (39)	25.2	25.6	25.9	24.2	21.0
Nonmanufacturing	1691.1	1984.7	2117.7	2352.7	2625.0
Contract Construction	74.5	79.4	92.7	111.1	127.1
Transport & Utilities	113.7	117.5	115.4	118.3	111.0
Wholesale & Retail Trade	511.7	578.2	603.9	654.0	710.0
Finance, Insurance, etc.	135.8	167.6	181.5	197.3	223.8
Services & Miscellaneous	494.7	675.6	740.1	829.2	948.7
Government	360.7	366.2	384.1	442.8	504.5
Federal	58.0	55.8	60.1	66.0	73.3
State	81.9	94.7	95.9	112.8	124.5
Local	220.8	215.7	228.1	264.0	306.8
Nonag. Wage & Sal. Employ.*	2268.9	2613.9	2742.5	3005.5	3263.3
As % of U.S.	2.95	2.92	2.87	2.71	2.60

*Establishment basis (CES Survey).

JANUARY CONTROL FORECAST

(T5)

MASSACHUSETTS EMPLOYMENT, POPULATION, AND LABOR FORCE
(Thousands of People)

	1975	1982	1985	1995	2007
Nonag. Wage & Sal. Employ.*	2268.9	2613.9	2742.5	3005.5	3263.3
As % of U.S.	2.95	2.92	2.87	2.71	2.60
Plus: All Other Nonag.	153.6	171.9	185.3	201.8	217.4
Plus: Agriculture	26.0	25.7	25.5	25.5	25.5
Total Mass. Jobs	2448.5	2811.6	2953.4	3232.8	3506.2
Less: Adjustments**	45.6	26.8	18.6	84.8	155.7
Total Employment***	2402.9	2784.8	2934.8	3148.0	3350.5
As % of U.S.	2.80	2.80	2.76	2.61	2.50
Mass. Population	5762.0	5809.5	5913.1	6058.0	6242.8
As % of U.S.	2.67	2.50	2.48	2.39	2.30
Mass. Populn. 16 and Over	4183.5	4491.7	4597.8	4648.9	4930.8
Mass. Employment Rate****	54.2	58.2	59.6	64.7	66.2
Indexed to 1973	95.3	102.3	104.8	113.6	116.3
U.S. Employment Rate	49.6	51.4	53.0	58.7	60.3
Mass. Index Rel. To U.S.	98.8	102.3	101.7	99.5	99.2
Labor Force	2705.3	3023.5	3127.5	3351.9	3571.8
Participation Rate	64.7	67.3	68.0	72.1	72.4
U.S. Participation Rate	60.5	63.2	64.4	68.2	68.5
Number of Unemployed	302.4	238.7	192.8	203.9	221.3
Unemployment Rate	11.2	7.9	6.2	6.1	6.2
<u>U.S. Unemployment Rate</u>	8.5	9.8	8.5	6.4	6.2

*Establishment basis (CES Survey).

**Adjustments for double counting and place of residence.

***Household basis (Current Population Survey).

****Total nonag. employment divided by the population sixteen and over.

JANUARY CONTROL FORECAST

(T5)

EMPLOYMENT IN MASSACHUSETTS AS A PER CENT OF U.S. EMPLOYMENT

	1975	1982	1985	1995	2007
Durables	2.99	3.48	3.37	3.20	3.21
Lumber (24)	.72	.77	.74	.61	.47
Furniture (25)	2.02	1.56	1.47	1.29	1.13
Stone, Clay, Glass (32)	1.73	2.05	1.95	1.68	1.40
Primary Metals (33)	1.36	1.64	1.65	1.53	1.44
Fabricated Metals (34)	3.38	3.23	3.07	2.54	2.08
Non-elec. Machin. (35)	3.60	4.59	4.53	4.26	4.47
Engines & Turbines (351)	NA	5.04	5.14	4.96	5.05
Metalworking Mach. (354)	NA	4.46	3.68	2.46	1.68
Spec. Industry M. (355)	NA	7.85	6.94	4.73	3.35
Gen. Industrial M. (356)	NA	2.97	2.97	2.66	2.50
Off. & Comput. M. (357)	NA	10.53	10.63	10.83	11.76
Rest of Industry Group	NA	1.26	1.29	1.30	1.44
Elec. Equipment (36)	4.87	5.44	5.39	5.08	5.07
Electronic Compon. (367)	NA	9.08	9.17	8.67	8.42
Rest of Industry Group	NA	4.01	3.78	3.00	2.39
Transport. Equip. (37)	1.76	1.77	1.65	1.40	1.19
Mot. Vehicles & P. (371)	.49	.83	.86	.90	.92
Aircraft & Parts (372)	NA	1.57	1.55	1.49	1.39
Rest of Industry Group	NA	3.52	3.07	2.13	1.38
Instruments (38)	7.94	8.03	8.16	7.51	7.03
Meas. & Control (382)	NA	8.72	9.02	8.99	9.12
Rest of Industry Group	NA	7.65	7.69	6.69	5.82
Nondurables	3.39	3.13	3.01	2.71	2.45
Food (20)	1.72	1.54	1.47	1.33	1.24
Textiles (22)	2.90	2.83	2.60	2.12	1.81
Apparel (23)	3.31	3.12	3.07	2.81	2.65
Paper (26)	4.34	3.93	3.71	3.13	2.72
Printing (27)	3.72	3.44	3.24	2.93	2.71
Chemicals (28)	1.95	1.65	1.67	1.62	1.59
Synthet. Materials (282)	NA	2.83	2.87	2.80	2.79
Rest of Industry Group	NA	1.41	1.40	1.32	1.26
Rubber (30)	4.57	4.02	4.09	3.47	2.97
Leather (31)	9.24	8.79	8.14	6.70	5.65
Other Nondurables (39)	6.18	6.61	6.61	6.69	6.98
Nonmanufacturing	2.92	2.85	2.82	2.67	2.56
Contract Construction	2.11	2.03	2.10	2.11	2.03
Transport & Utilities	2.50	2.32	2.25	2.05	1.90
Wholesale & Retail Trade	3.00	2.81	2.73	2.55	2.40
Finance, Insurance, etc.	3.26	3.13	3.02	2.83	2.72
Services & Miscellaneous	3.56	3.56	3.53	3.29	3.13
Government	2.46	2.32	2.34	2.32	2.25
Federal	2.11	2.04	2.04	2.04	2.04
State & Local	2.54	2.38	2.41	2.37	2.30

The MEPA Long Term Forecast

1982 - 2007

by James Kindahl, George Treyz and Roy Williams

I. Forecasting - Long-Term and Short-Term

An economic forecast is necessarily based on information available at the time the forecast is made. There are many interrelations in the economy which take considerable time to work themselves out, hence forces already in motion in 1982 will have some influence on events 25 years later. A forecast is a prediction of how the economy will behave in the future if there are no further changes in factors not predicted explicitly by the forecaster - that is, if there are no wars, no shifts in international economic relations, no changes in the international oil markets, no technological changes (such as the invention and development of the electric light, the automobile, the transistor, or the computer), no migrations for non-economic reasons, no political disturbances, no marked changes in governmental economic policy, no marked changes in weather patterns, or myriads of other events which may affect the economy significantly but which cannot be predicted.

Of course such events will occur; by their very nature, they cannot be predicted, and cannot be incorporated into a forecast. The only thing known in advance is that some such events will occur; when, where, and in what form and magnitude, is wholly unknown. This virtually guarantees that the forecast will be wrong; shocks will occur; the longer the period of the forecast, the greater the expected cumulative impact of such events.

Over a twenty-five year period, such impacts can be enormous. Consider the marked changes in the economy in the preceeding 25 year period, 1957 to 1982, or consider the fate of a 25-year forecast from 1927 to 1952, during which occurred the Great Depression, World War II, the transition to a peacetime economy, and the Korean War. Such forecasts would surely have been far off the mark; yet they might well have been accurate descriptions of the path the economy would have taken had not those massive changes in the economy occurred.

The present forecast must be viewed with these considerations in mind. The further into the future a forecast is made, the more likely are the results to be rendered inaccurate by unforeseen events. A one-year forecast may have a reasonably high probability of predicting key figures, such as total employment or population, within (say) 2%; a 10-year forecast is substantially less likely to do so, and a 25-year forecast has little chance of doing so.

II. Two Major Sources of Uncertainty

In particular, the MEPA long-range forecast of the Massachusetts economy is affected by all of these sources of uncertainty, two of which deserve further mention. The first of those is the performance of the U.S. economy itself. Clearly, the Massachusetts economy is embedded within the U.S. economy. Events in the U.S. economy will certainly be among the main determinants, if not the main determinant, of the performance of the Massachusetts economy. The MEPA forecasts are based on a forecast of the U.S. economy to 2007 called TRENDLONG2007A, which was prepared by Data Resources, Inc., of Lexington, Mass. That forecast is, of course, subject to all the

uncertainties of long-term forecasts discussed in section I. The MEPA forecast predicts the behavior of the Massachusetts economy conditional on this forecast; hence any errors in the U.S. forecast will be carried over into the MEPA forecast.

The second major uncertainty stems from the fact that human migrations to and from Massachusetts play a very important role in the economy of the Commonwealth; yet the precise determinants of these migrations are not well understood: estimates of the sensitivity of migration between states to economic conditions in the various states vary widely. Yet no forecast of a state's economy can be made without some assumption as to how people will make such decisions. Such decisions are far more important for long-range forecasts than for short-range ones; it is well known that migration because of economic changes typically occurs with significant time lags.

For this forecast, a very specific assumption has been made: population migrations occur in such a way that by 2007, the unemployment rates in the U.S. and in Massachusetts will be equal. The basic idea is that, in the long run, enough workers will seek out employment opportunities by migration so that there is no reason to expect Massachusetts rates to be higher or lower than elsewhere. Whether or not this would happen (in the absence of the other, unpredictable changes which surely will occur) is not known. Hence the necessity for some assumption about this matter is a fundamental cause of uncertainty about the forecast; a substantially different assumption would give a substantially different result.

III. The Forecast

The long term forecast provides predictions for each of 25 years (including some quarterly forecasts). The sheer volume of data generated defies summary in verbal form; the interested reader will need to consult the tables directly. Given here are just a few highlights of the forecast, primarily concerned with the broad sweep over the 25 year period.

Total Massachusetts payroll employment will rise at an annual rate of about 1% per year, or 25% over the full period. This is considerably less than the predicted growth of the U.S. economy; the share of Massachusetts in U.S. employment will decline from 2.92% to 2.60%. Population will grow even less rapidly than employment, and also continue to decline slightly as a percentage of U.S. population. Unemployment for 2007 is predicted (by assumption) to be the same as the U.S. , 6.2% of the labor force.

Real disposable income per capita will increase by some 36% (1.2% per year) over the period, slightly less than that of the U.S. as a whole.

The shift in the composition of employment will continue its long term trend. Manufacturing employment will decline from 24.1% of Massachusetts employment to 19.6% by 2007; the number of workers employed in manufacturing will rise by only 1.4%, compared with the rise of 25% in total employment. This 1.4% rise, however, is the net result of a number of contradictory movements. Durable goods manufacturing employment will rise by nearly 18%,

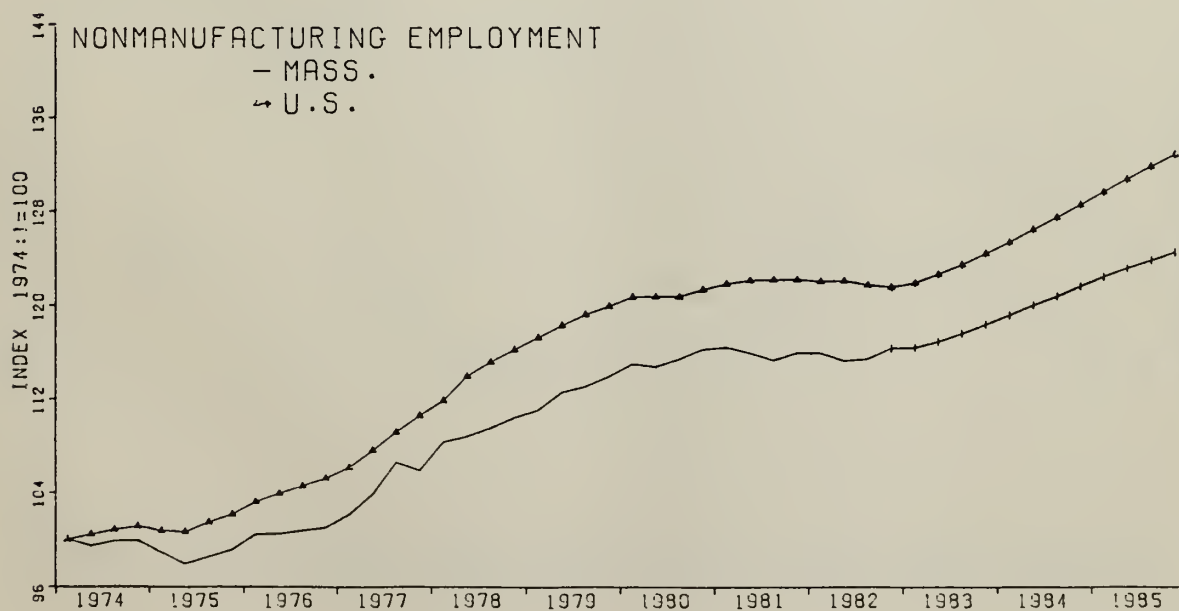
spurred by increases in the "high tech" industries of non-electrical machinery, electrical equipment, and instruments; declines in lumber and furniture, primary metals, fabricated metals, and transportation equipment partially offset those increases. Non-durables manufacturing, on the other hand, shows forecasted declines in every major sector except chemicals; large percentage declines are foreseen for the leather, textile, food processing, apparel, and paper industries, continuing long-standing trends.

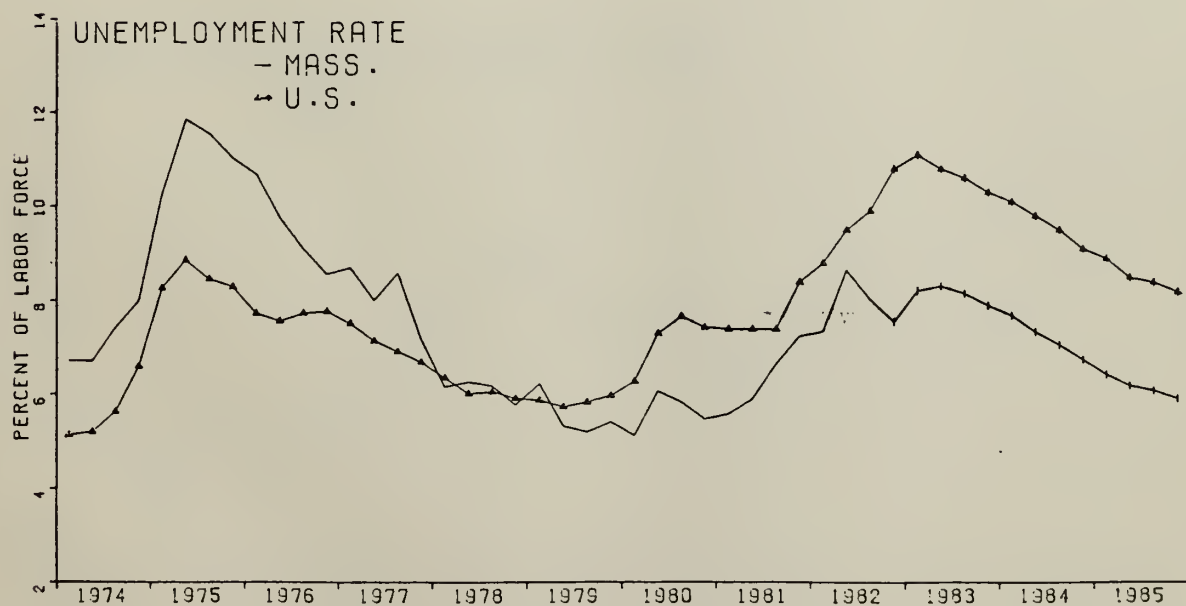
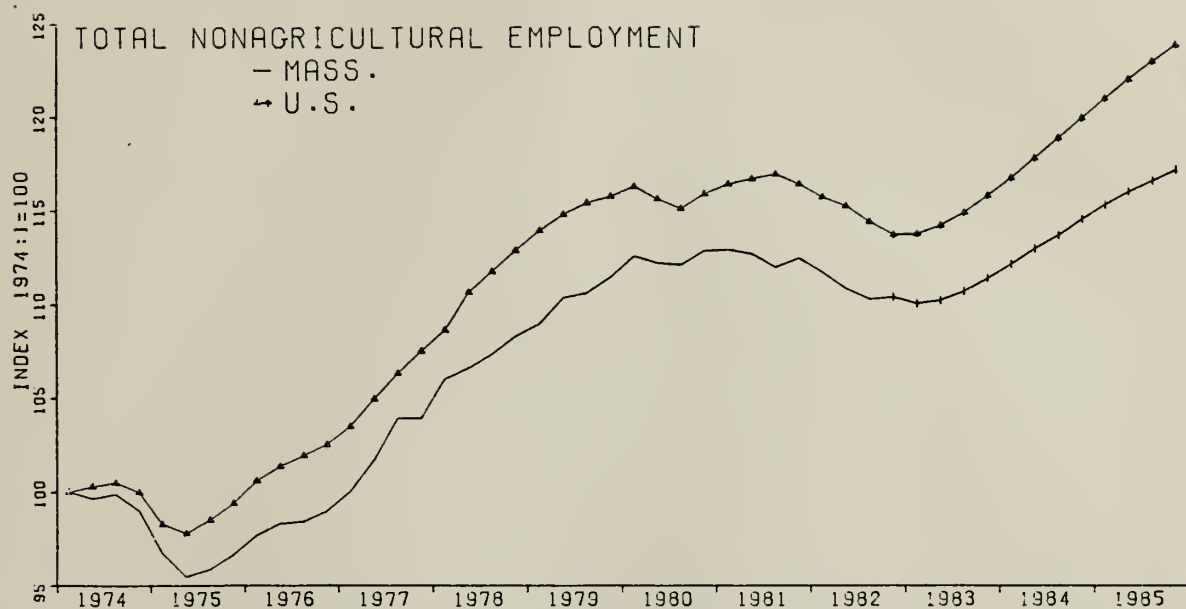
Non-manufacturing employment as a whole is predicted to rise by some 32%, paced by large percentage increases in contract construction (60%), services and miscellaneous (40%), finance, insurance, and real estate (39%), and government at all levels (38%). In the non-manufacturing area, only transportation and utilities show a decline (6%).

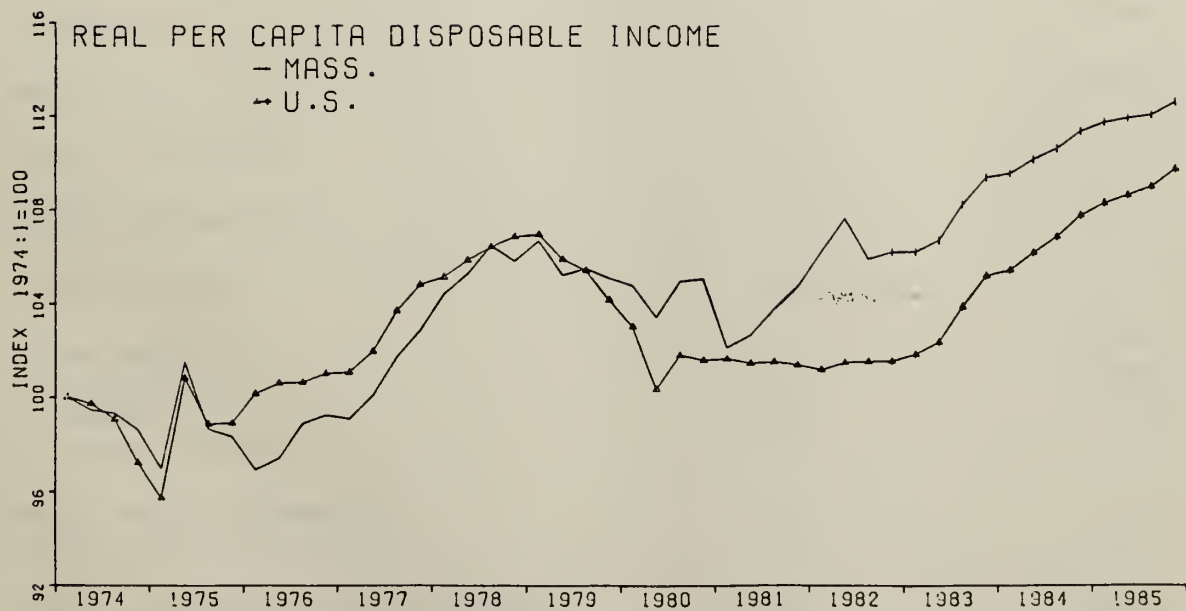
Inflation in Massachusetts will proceed apace with that of the U.S. ; the consumer price level for Boston is predicted to be 5.0 times its 1982 level by 2007, a rate of increase very slightly more than that predicted for the U.S. as a whole. The similarity is not unexpected. Inflation rates can differ moderately among areas of the country; but for the most part, the existence of national markets, a national currency, and a national monetary and fiscal policy means that inflationary pressures are very similar throughout the country.

Data Resources Summary Table for the U.S. Economy - CONTROL22882

	1982		1983		1984		Years						
	III	IV	I	II	III	IV	I	II	1981	1982	1983	1984	1985
GNP and Its Components Billions of Dollars - SAAR													
Total Consumption.....	1986.3	2022.7	2057.5	2100.7	2145.2	2199.5	2250.1	2303.2	1843.2	1969.0	2125.7	2327.6	2543.0
Nonres. Fixed Investment.....	344.2	332.7	325.2	326.1	332.6	341.2	352.8	364.9	346.1	346.5	331.3	371.2	423.5
Res. Fixed Investment.....	94.3	108.6	122.8	131.2	138.2	144.4	149.3	155.2	105.0	97.9	134.2	159.0	186.7
Inventory Investment.....	4.7	-22.3	-15.7	-3.7	4.6	8.6	17.9	18.4	20.4	-17.3	-1.6	22.0	31.8
Net Exports.....	6.9	3.7	-2.9	-5.7	-9.0	-10.1	-11.5	-9.9	26.1	19.2	-6.9	-8.6	-5.4
Federal Purchases.....	259.0	273.7	275.4	278.1	285.6	294.7	299.4	307.8	228.9	256.7	283.4	312.2	348.8
State and Local Govt. Purchases.....	392.7	397.1	402.0	407.0	412.6	417.2	423.0	431.1	368.0	389.2	409.7	435.6	473.3
Gross National Product.....	3088.2	3116.2	3164.2	3233.6	3309.8	3395.6	3481.1	3570.7	2937.7	3061.3	3275.8	3619.1	4001.7
Real GNP (1972 Dollars).....	1481.1	1474.1	1477.7	1490.3	1506.6	1524.4	1539.7	1558.3	1502.6	1476.1	1499.8	1567.7	1634.6
Prices and Wages - Annual Rates of Change													
Implicit Price Deflator.....	5.0	5.7	5.3	5.4	5.1	5.7	6.1	5.5	9.4	6.1	5.3	5.7	6.0
CPI - All Urban Consumers.....	7.6	3.3	4.9	5.4	5.4	5.4	6.5	5.5	10.3	6.2	5.1	5.7	5.8
Producer Price Index - Finished Goods	6.4	4.4	4.8	4.4	4.3	5.7	7.2	5.5	9.3	4.0	4.6	5.6	6.2
Compensation per Hour.....	6.4	4.3	6.5	5.8	6.5	6.5	8.4	6.3	9.6	7.1	5.9	6.9	7.0
Core Inflation.....	7.6	7.2	6.8	6.5	6.2	6.0	5.9	5.8	9.0	7.8	6.4	5.8	5.8
Production and Other Key Measures													
Industrial Production (1967=1.000)...	1.382	1.358	1.376	1.396	1.424	1.458	1.482	1.515	1.509	1.388	1.414	1.527	1.621
Annual Rate of Change.....	-3.4	-6.7	5.3	6.2	8.2	10.0	6.6	9.1	2.6	-8.0	1.9	8.0	6.1
Housing Starts (Mil. Units).....	1.118	1.315	1.403	1.463	1.516	1.533	1.574	1.617	1.100	1.077	1.479	1.658	1.834
Retail Unit Car Sales (Mil. Units)...	7.7	8.4	8.2	8.4	8.7	9.3	9.3	9.6	8.5	7.9	8.7	9.8	10.4
Unemployment Rate (%).....	9.9	10.8	11.1	10.8	10.6	10.3	10.1	9.8	7.6	9.7	10.7	9.6	8.5
Federal Budget Surplus (NIA).....	-156.0	-189.8	-181.0	-177.2	-192.6	-195.5	-182.8	-178.9	-60.0	-145.9	-186.6	-176.9	-163.6
Money and Interest Rates													
Money Supply (M-2).....	1941.4	1990.5	2036.7	2072.8	2126.6	2174.6	2222.3	2271.2	1807.4	1990.5	2174.6	2381.6	2624.9
% Change, 4th-Qtr. to 4th-Qtr.....	10.1	10.5	9.6	7.3	10.8	9.4	9.1	9.1	9.5	10.1	9.3	9.5	10.2
New AA Corp. Utility Rate (%).....	15.02	12.44	11.64	11.07	10.65	10.48	10.47	10.50	16.25	15.10	10.96	10.56	10.98
New High-Grade Corp. Bond Rate (%)...	14.09	11.03	10.72	10.40	10.10	9.99	10.02	10.06	15.01	13.88	10.30	10.12	10.53
Federal Funds Rate (%).....	11.01	9.25	8.03	8.77	9.01	9.33	9.73	9.20	16.38	12.25	8.78	9.05	9.74
Prime Rate (%).....	14.72	11.90	10.85	11.00	11.38	11.87	12.37	11.89	18.87	14.85	11.28	11.68	11.66
Incomes - Billions of Dollars													
Personal Income.....	2592.4	2620.5	2667.9	2720.6	2785.5	2865.2	2920.9	2991.5	2415.8	2568.9	2759.8	3027.8	3308.9
Real Disposable Income (%Ch).....	1.3	-1.3	1.8	2.4	7.4	6.4	2.0	4.1	2.5	1.0	2.3	4.3	3.3
Saving Rate (%).....	6.9	6.1	6.2	6.2	7.0	7.3	7.1	7.1	6.4	6.6	6.7	7.1	7.1
Profits Before Tax.....	180.3	180.6	183.8	185.5	191.6	203.1	212.0	222.5	232.1	176.0	191.0	227.9	269.1
Profits After Tax.....	119.4	120.6	122.3	123.5	127.5	134.7	140.3	147.1	150.9	117.8	127.0	150.5	177.5
Company Profits.....	94.0	88.0	93.1	101.5	109.9	113.0	115.2	118.7	107.2	91.0	104.4	120.9	138.1
Four-Qtr. Percent Change.....	-11.1	-16.5	3.6	10.3	16.9	28.4	23.8	16.9	2.6	-15.2	14.7	15.8	14.2
Composition of Real GNP - Annual Rates of Change													
Gross National Product.....	0.7	-1.9	1.0	3.4	4.5	4.8	4.1	4.9	1.9	-1.8	1.6	4.5	4.3
Final Sales.....	-1.3	1.6	0.3	2.0	3.5	4.4	3.0	5.0	1.0	-0.7	1.2	3.9	4.1
Total Consumption.....	0.6	1.9	1.5	2.7	3.5	5.0	2.9	4.4	1.8	0.8	2.2	3.8	3.4
Nonres. Fixed Investment.....	-7.7	-14.2	-11.5	-2.4	3.9	6.4	8.4	9.4	3.5	-4.1	-7.1	6.9	7.9
Equipment.....	-8.8	-10.8	-10.4	0.6	7.6	10.6	11.3	12.4	2.4	-6.7	-5.5	10.0	8.8
Nonres. Construction.....	-5.2	-20.7	-13.9	-8.5	-3.8	-3.0	1.7	2.4	6.3	1.8	-10.5	0.0	5.6
Res. Fixed Investment.....	-5.9	69.5	54.3	23.3	15.6	12.0	6.4	10.0	-4.9	-9.0	31.1	11.2	9.6
Exports.....	-16.7	-8.3	-2.9	3.0	3.9	5.7	6.2	5.9	-0.5	-5.6	-2.8	5.5	5.8
Imports.....	4.5	-6.5	2.6	4.0	5.4	6.0	5.7	5.4	7.2	1.2	2.5	5.4	5.3
Federal Government.....	23.2	13.1	-3.1	-1.3	5.2	1.7	-0.2	5.8	3.7	4.3	3.7	2.6	3.9
State and Local Governments.....	-0.2	-1.2	-0.7	-0.6	-0.3	-1.2	-0.7	1.7	-0.8	-1.1	-0.7	0.2	2.2







The JANUARY 1983

Massachusetts Revenue Analysis and Forecasting Model Tax Forecast

by

George Treyz & Roy Williams*

	Fiscal 1983 (Millions of Dollars)	Fiscal 1984
Alcoholic Beverages	83	88
Commercial Banks	33	32
Savings Banks	48	47
Cigarettes	150	149
Corporations	497	517
Deeds	12	13
Estate and Inheritance	97	107
Income	2418	2663
Insurance	121	122
Motor Fuel	237	222
Public Utilities	37	38
Racing and Boxing	38	41
Room Occupancy	26	30
Sales and Use	1017	1095
Regular	665	700
Meals	180	196
Motor Vehicle	172	199
Misc. Dept. of Revenue	1	1
Beano, Raffles & Bazaars	<u>7</u>	<u>7</u>
<u>Total (of amounts before rounding)</u>	4822	5173

*Director and Associate Director, respectively, of the MEPA project, Economics Department, University of Massachusetts, Amherst, MA 01003. (Tel. 413-545-0915). Technical assistance from Margaret Larson and Loren Lidsky, MEPA staff.

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JANUARY CONTROL FORECAST (T5)

MASSACHUSETTS TAX REVENUES
(Millions of Dollars)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
Alcoholic Beverages	85	84	83	88	91
Commercial Banks	38	29	33	32	34
Savings Banks	38	41	48	47	51
Cigarettes	148	145	150	149	149
Corporations	442	498	497	517	609
Deeds	13	12	12	13	14
Estate and Inheritance	82	99	97	107	115
Income	2058	2324	2418	2663	2946
Insurance	114	122	121	122	145
Motor Fuel	238	269	237	222	232
Public Utilities	18	30	37	38	45
Room Occupancy	22	24	26	30	34
Sales and Use	860	917	1017	1095	1205
Regular	572	608	665	700	767
Meals	155	164	180	196	213
Motor Vehicle	132	146	172	199	226
Misc. Dept. of Revenue*	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Dept. of Revenue Total	4156	4598	4777	5124	5671
Racing and Boxing	32	35	38	41	45
Beano, Raffles & Bazaars**	<u>6</u>	<u>6</u>	<u>7</u>	<u>7</u>	<u>8</u>
<u>Comptrollers' Rept. Total</u>	4194	4640	4822	5173	5724

*Includes Beano, Raffles & Bazaars before January, 1978

**As reported by Comptroller less amount reported by D. of R.

JANUARY CONTROL FORECAST (T5)

MASSACHUSETTS TAX REVENUES

(Per Cent Changes at Annual Rates)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
Alcoholic Beverages	5.19	-.35	-1.41	5.58	3.23
Commercial Banks	2.33	-23.14	12.96	-4.23	8.08
Savings Banks	13.78	8.42	17.17	-1.16	7.68
Cigarettes	2.85	-1.87	2.97	-.63	.41
Corporations	.79	12.60	-.19	4.06	17.76
Deeds	5.88	-3.66	-7.69	15.24	8.67
Estate and Inheritance	4.01	20.99	-2.57	11.04	6.58
Income	10.63	12.95	4.06	10.10	10.63
Insurance	2.25	7.19	-.67	.65	18.62
Motor Fuel	12.02	13.35	-11.95	-6.35	4.39
Public Utilities	-23.52	70.49	22.72	1.87	18.58
Room Occupancy	23.87	10.01	8.59	12.12	13.84
Sales and Use	15.38	6.66	10.85	7.70	10.08
Regular	13.10	6.13	9.40	5.32	9.53
Meals	13.01	5.61	9.48	9.00	8.64
Motor Vehicle	29.97	10.20	18.43	15.52	13.42
Misc. Dept. of Revenue*	<u>-46.57</u>	<u>95.79</u>	<u>-9.82</u>	<u>30.12</u>	<u>8.52</u>
Dept. of Revenue Total	9.48	10.65	3.90	7.26	10.67
Racing and Boxing	9.77	8.76	7.85	8.57	8.61
Beano, Raffles & Bazaars**	<u>18.83</u>	<u>6.84</u>	<u>8.59</u>	<u>7.80</u>	<u>8.62</u>
<u>Comptrollers' Rept. Total</u>	9.49	10.63	3.93	7.27	10.65

*Includes Beano, Raffles & Bazaars before January, 1978

**As reported by Comptroller less amount reported by D. of R.

JANUARY CONTROL FORECAST

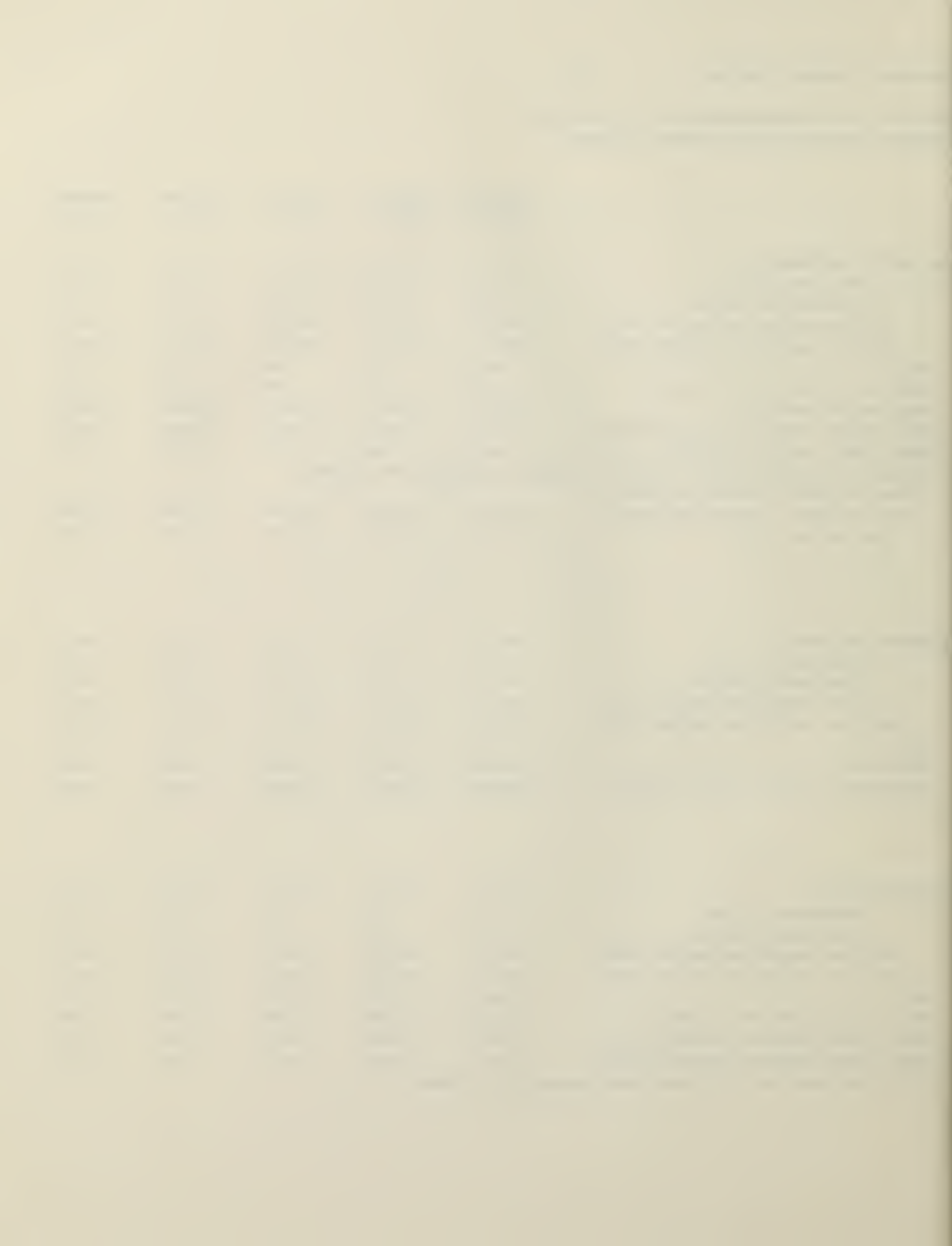
(T5)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Money amounts in Millions of Dollars)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
ALCOHOLIC BEVERAGES	84.7	84.4	83.3	87.9	90.7
Surprise Factor	-.0	.0	-.9	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	84.7	84.4	84.1	87.9	90.7
Portion explained below (SA)	84.7	84.5	84.2	87.9	90.8
Mult	1.01	.97	.95	.95	.95
Tax Rate (per 67\$ of sales)	.24	.24	.24	.24	.24
Population over 18	4277	4347	4398	4439	4475
Real disp. income per adult(1.2*)	6.172	6.235	6.241	6.431	6.557
Tax effect ratio (-1.3*)	.89	.90	.90	.90	.91
*Elasticity (power diff. from 1 to which variable is raised.)					
Same variable without exponent:					
Real disp. income per adult	4.663	4.704	4.708	4.829	4.909
Tax effect ratio	1.09	1.09	1.08	1.08	1.08
COMMERCIAL BANKS	38.2	29.4	33.2	31.8	34.4
Surprise Factor	-.0	.0	2.0	0.0	0.0
Processing Factor	7.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	31.2	29.4	31.2	31.8	34.4
Portion explained below (SA)	31.0	29.3	31.2	31.7	34.3
Mult	.78	.71	.71	.71	.71
Tax Rate	.1254	.1254	.1254	.1254	.1254
Commercial bank profits (mil\$)	2082	2167	2285	2323	2509
SAVINGS BANKS	37.6	40.8	47.8	47.3	50.9
Surprise Factor	-.0	.0	1.8	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	37.6	40.8	46.1	47.3	50.9
Portion explained below (SA)	37.3	40.6	46.0	47.0	50.5
Mult	1.061	1.115	1.204	1.204	1.204
Tax Rate (Fixed wt. index*)	1.00	1.00	1.00	1.00	1.00
Sav. bank deposits index (.37*)	1.052	1.089	1.099	1.151	1.248
Comm. bank profits index (.63*)	1.47	1.52	1.62	1.64	1.75

*Weights used for rate and base composite indexes.



JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Per Cent Changes at Annual Rates)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
ALCOHOLIC BEVERAGES	5.19	-.35	-1.41	5.58	3.23
Surprise Factor	-.00	.00	-1.05	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00	0.00
Echo Factor	-.00	0.00	-.00	1.11	0.00
Portion explained below (NS)	5.19	-.35	-.36	4.47	3.23
Portion explained below (SA)	5.15	-.25	-.40	4.48	3.23
Mult	5.20	-3.40	-2.00	0.00	0.00
Tax Rate (per 67\$ of sales)	0.00	0.00	0.00	0.00	0.00
Population over 18	1.20	1.63	1.17	.93	.82
Real disp. income per adult(1.2*)	-2.24	1.02	.10	3.04	1.96
Tax effect ratio (-1.3*)	1.05	.56	.36	.45	.42
*Elasticity (power diff. from 1 to which variable is raised.)					
Same variable without exponent:					
Real disp. income per adult	-1.90	.86	.09	2.57	1.65
Tax effect ratio	-.79	-.42	-.28	-.34	-.32
COMMERCIAL BANKS	2.33	-23.14	12.96	-4.23	8.08
Surprise Factor	0.00	0.00	6.72	0.00	0.00
Processing Factor	18.73	0.00	0.00	0.00	0.00
Echo Factor	0.00	-17.22	-.00	-6.06	0.00
Portion explained below (NS)	-16.41	-5.92	6.23	1.83	8.08
Portion explained below (SA)	-16.59	-5.44	6.50	1.67	8.00
Mult	-23.34	-9.12	1.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00	0.00
Commercial bank profits (mil\$)	8.80	4.06	5.45	1.67	8.00
SAVINGS BANKS	13.78	8.42	17.17	-1.16	7.68
Surprise Factor	0.00	.00	4.29	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00	0.00
Echo Factor	0.00	0.00	-.00	-3.76	0.00
Portion explained below (NS)	13.78	8.42	12.88	2.59	7.68
Portion explained below (SA)	13.87	8.77	13.25	2.27	7.27
Mult	4.91	5.09	8.00	0.00	0.00
Tax Rate (Fixed wt. index*)	0.00	0.00	0.00	0.00	0.00
Sav. bank deposits index (.37*)	3.27	3.51	.92	4.69	8.40
Comm. bank profits index (.63*)	10.91	3.49	6.52	1.30	6.80

*Weights used for rate and base composite indexes.

JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Money amounts in Millions of Dollars)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
CIGARETTES	148.1	145.4	149.7	148.7	149.3
Surprise Factor	.0	.0	1.7	0.0	0.0
Processing Factor	3.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	145.1	145.4	147.9	148.7	149.3
Portion explained below (SA)	145.0	145.3	147.9	148.7	149.3
Mult	1.02	1.00	1.01	1.01	1.01
Tax Rate	.21	.21	.21	.21	.21
Population over 18	4277	4347	4398	4439	4475
Per capita Use (Time trend)	.664	.656	.648	.641	.633
Tax effect ratio (-.75*)	.83	.84	.85	.86	.86
*Elasticity (power diff. from 1 to which variable is raised.)					
Same variable without exponent:					
Tax effect ratio	1.28	1.26	1.24	1.23	1.22
CORPORATIONS	442.3	498.1	497.1	517.3	609.2
Surprise Factor	-.0	.0	21.9	0.0	0.0
Processing Factor	-15.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	457.3	498.1	475.2	517.3	609.2
Portion explained below (SA)	457.8	502.8	474.7	515.5	606.3
Mult	.99	1.19	1.35	1.35	1.35
Corporate profits (1.01*)	5964	5406	4378	4689	5551
Tax rate	.095	.095	.095	.095	.095
Manufact. Capital stock (.08*)	21480	24611	26937	29730	33309
Tax rate	.0026	.0026	.0026	.0026	.0026
Mnfact. equip. investment (-.09*)	2393	2513	2214	2238	2601
Credit rate	.03	.03	.03	.03	.03
*Probable approx. contribution to total collections in a typical year.					
DEEDS	13.0	12.5	11.5	13.3	14.4
Surprise Factor	.0	-.0	-.6	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	13.0	12.5	12.1	13.3	14.4
Portion explained below (SA)	13.0	12.5	12.2	13.3	14.5
Mult	.84	.74	.67	.67	.67
Tax Rate (per \$500)	1.14	1.14	1.14	1.14	1.14
Disposable income	50599	55621	59407	65091	70710

JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

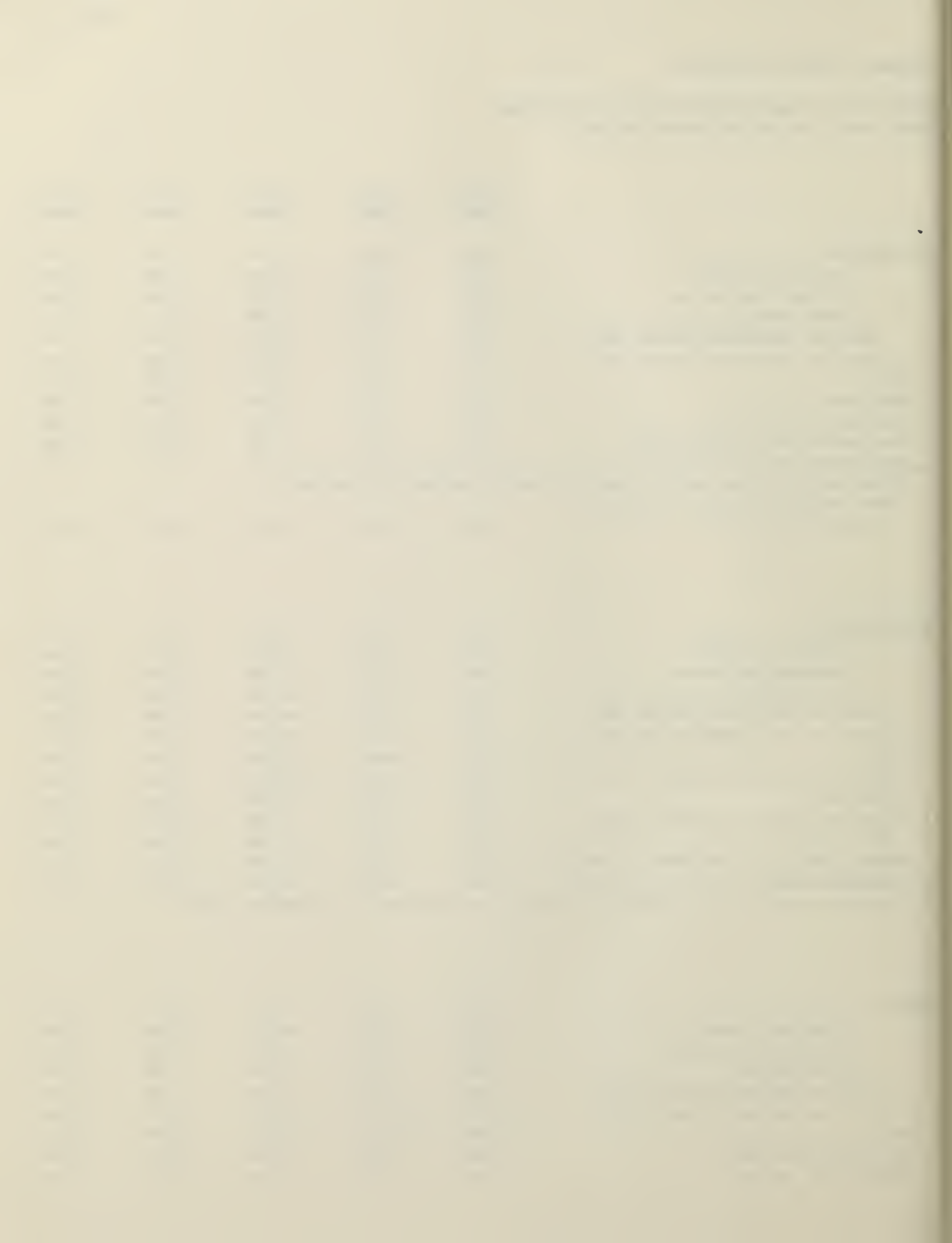
(Per Cent Changes at Annual Rates)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
CIGARETTES	2.85	-1.87	2.97	-.63	.41
Surprise Factor	.00	.00	1.19	0.00	0.00
Processing Factor	2.08	0.00	0.00	0.00	0.00
Echo Factor	-.00	-2.03	-.00	-1.16	0.00
Portion explained below (NS)	.76	.16	1.78	.54	.41
Portion explained below (SA)	.72	.24	1.77	.54	.41
Mult	-1.18	-1.26	1.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00	0.00
Population over 18	1.20	1.63	1.17	.93	.82
Per capita Use (Time trend)	-1.19	-1.19	-1.19	-1.19	-1.19
Tax effect ratio (-.75*)	1.93	1.11	.80	.81	.80
*Elasticity (power diff. from 1 to which variable is raised.)					
Same variable without exponent:					
Tax effect ratio	-2.53	-1.47	-1.06	-1.08	-1.06

CORPORATIONS	.79	12.60	-.19	4.06	17.76
Surprise Factor	0.00	0.00	4.40	0.00	0.00
Processing Factor	-3.42	0.00	0.00	0.00	0.00
Echo Factor	-.00	3.69	0.00	-4.80	0.00
Portion explained below (NS)	4.20	8.91	-4.59	8.86	17.76
Portion explained below (SA)	4.43	9.82	-5.59	8.60	17.62
Mult	11.19	20.44	13.00	0.00	0.00
Corporate profits (1.01*)	-5.68	-9.36	-19.00	7.10	18.38
Tax rate	0.00	0.00	0.00	0.00	0.00
Manufact. Capital stock (.08*)	16.91	14.57	9.45	10.37	12.04
Tax rate	0.00	0.00	0.00	0.00	0.00
Mnfact. equip. investment (-.09*)	15.40	5.03	-11.88	1.04	16.25
Credit rate	0.00	0.00	0.00	0.00	0.00

*Probable approx. contribution to total collections in a typical year.

DEEDS	5.88	-3.66	-7.69	15.24	8.67
Surprise Factor	0.00	-.00	-4.87	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00	0.00
Echo Factor	0.00	-.00	0.00	5.78	0.00
Portion explained below (NS)	5.88	-3.66	-2.82	9.47	8.67
Portion explained below (SA)	5.67	-3.75	-2.81	9.57	8.63
Mult	-4.92	-12.44	-9.00	0.00	0.00
Tax Rate (per \$500)	0.00	0.00	0.00	0.00	0.00
Disposable income	11.13	9.93	6.81	9.57	8.63



JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Money amounts in Millions of Dollars)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
ESTATE AND INHERITANCE	82.1	99.4	96.8	107.5	114.6
Surprise Factor	.0	.0	-1.1	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	82.1	99.4	97.9	107.5	114.6
Portion explained below (SA)	82.2	99.4	98.0	107.6	114.6
Mult	.96	1.07	1.01	1.01	1.01
Household net worth	122755	133149	138177	151748	161691
INCOME	2057.7	2324.1	2418.5	2662.8	2945.9
Surprise Factor (not used)	.0	.0	-.6	0.0	0.0
Processing Factor	-25.0	-31.0	-70.5	-57.8	-61.2
Portion explained (see (NS)	2082.7	2355.1	2488.9	2720.6	3007.2
separate detail) (SA)	2082.7	2355.1	2488.9	2720.6	3007.2
Mult	1.08	1.09	1.10	1.10	1.10
Earned Income	42417	46341	48637	52659	57573
Tax Rate	.0538	.0538	.0538	.0538	.0538
Unearned Income	2132	2362	2489	2654	2931
Tax Rate	.1075	.1075	.1075	.1075	.1075
Total Deductions & Exemptions	10573	10844	11525	11968	12596
INSURANCE	114.0	122.2	121.4	122.2	144.9
Surprise Factor	.0	.0	8.1	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	114.0	122.2	113.3	122.2	144.9
Portion explained below (SA)	114.2	123.9	113.4	121.5	143.8
Mult	.87	1.04	1.17	1.17	1.17
Corporate profits	5964	5406	4378	4689	5551

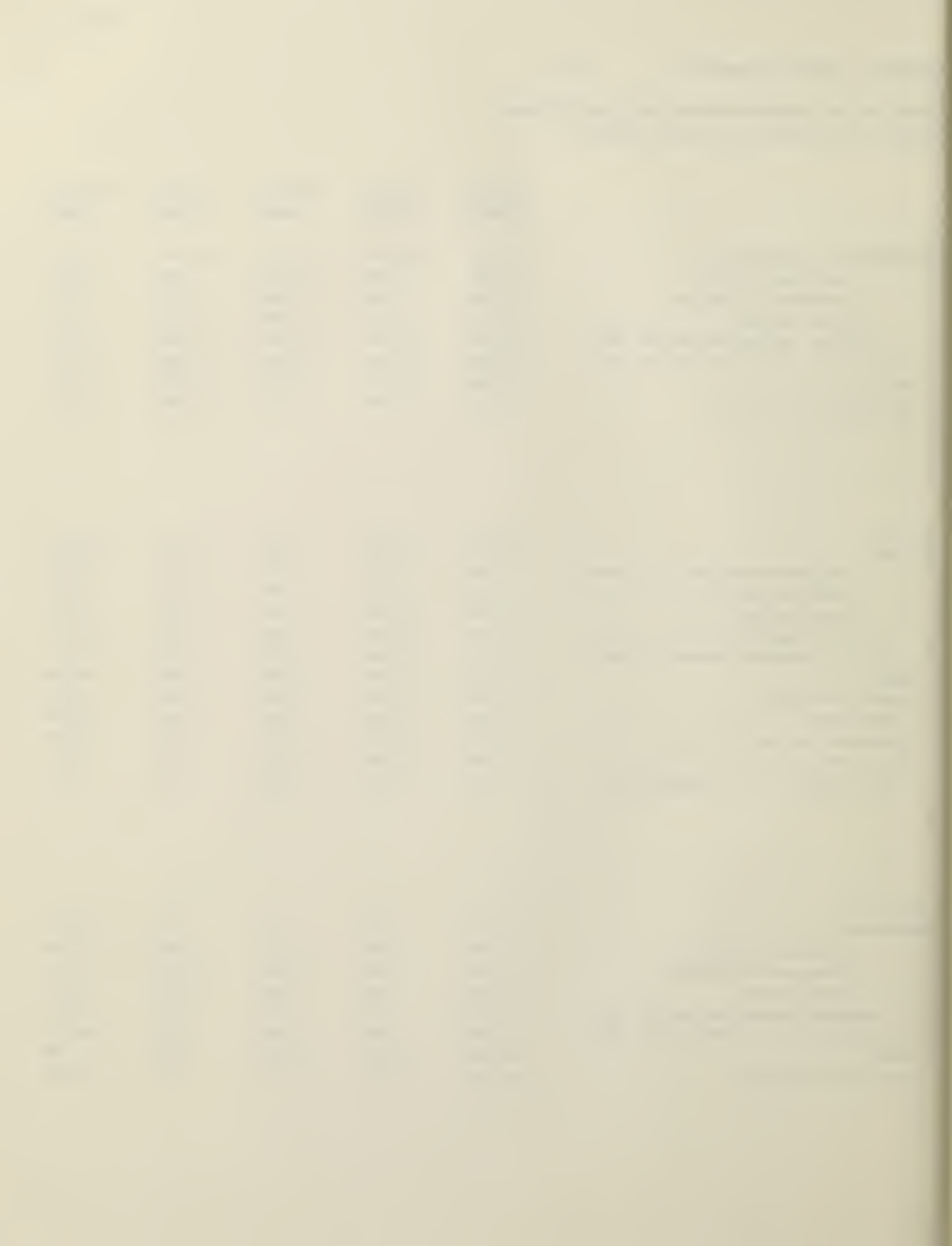
JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Per Cent Changes at Annual Rates)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
ESTATE AND INHERITANCE	4.01	20.99	-2.57	11.04	6.58
Surprise Factor	0.00	0.00	-1.11	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00	0.00
Echo Factor	-4.11	-.00	-.00	1.25	0.00
Portion explained below (NS)	8.12	20.99	-1.46	9.80	6.58
Portion explained below (SA)	8.05	20.87	-1.41	9.82	6.55
Mult	-1.04	11.43	-5.00	0.00	0.00
Household net worth	9.18	8.47	3.78	9.82	6.55
INCOME	10.63	12.95	4.06	10.10	10.63
Surprise Factor (not used)	.00	.00	-.03	0.00	0.00
Processing Factor	-1.34	-1.49	-2.99	-2.32	-2.25
Echo Factor	-.00	1.36	1.37	3.12	2.35
Portion explained (see (NS)	11.97	13.08	5.69	9.31	10.53
separate detail) (SA)	11.97	13.08	5.69	9.31	10.53
Mult	-.34	1.49	1.00	0.00	0.00
Earned Income	10.52	9.25	4.95	8.27	9.33
Tax Rate	0.00	0.00	0.00	0.00	0.00
Unearned Income	8.56	10.80	5.37	6.66	10.43
Tax Rate	0.00	0.00	0.00	0.00	0.00
Total Deductions & Exemptions	4.03	2.56	6.28	3.84	5.25
INSURANCE	2.25	7.19	-.67	.65	18.62
Surprise Factor	.00	0.00	6.59	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00	0.00
Echo Factor	0.00	-.00	0.00	-7.15	0.00
Portion explained below (NS)	2.25	7.19	-7.26	7.80	18.62
Portion explained below (SA)	2.66	8.49	-8.48	7.10	18.38
Mult	8.84	19.70	13.00	0.00	0.00
Corporate profits	-5.68	-9.36	-19.00	7.10	18.38



JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Money amounts in Millions of Dollars)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
MOTOR FUELS	237.5	269.2	237.1	222.0	231.7
Surprise Factor	.0	.0	.4	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	237.5	269.2	236.7	222.0	231.7
Portion explained below (SA)	235.1	269.3	237.2	221.9	231.6
Mult	1.01	.99	.96	.96	.96
Tax Rate	.099	.112	.102	.098	.105
Consumption, 72 \$, gas & oil	694.8	721.0	716.3	696.3	679.6
Tax effect ratio (-.23*)	1.000	1.000	1.003	1.005	1.005
*Elasticity (power diff. from 1 to which variable is raised.)					
Same variable without exponent:					
Tax effect ratio	.999	1.002	.988	.980	.979
PUBLIC UTILITIES	17.6	30.1	36.9	37.6	44.6
Surprise Factor	-.0	.0	1.9	0.0	0.0
Processing Factor	0.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	17.6	30.1	35.0	37.6	44.6
Portion explained below (SA)	17.7	30.6	34.9	37.4	44.3
Mult	.54	1.03	1.45	1.45	1.45
Corporate profits	5964	5406	4378	4689	5551
ROOM OCCUPANCY	22.1	24.3	26.4	29.6	33.7
Surprise Factor	.0	.0	.1	0.0	0.0
Processing Factor	1.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	21.1	24.3	26.2	29.6	33.7
Portion explained below (SA)	21.2	24.3	26.3	29.8	33.9
Mult	1.22	1.32	1.37	1.37	1.37
Tax Rate	.057	.057	.057	.057	.057
Real p. c. disp. income (.74*)	2.452	2.467	2.477	2.533	2.575
Disposable income	51299	56263	60035	65873	71819
Employment effect (2.1*)	.87	.84	.81	.82	.84
*Elasticity (power diff. from 1 to which variable is raised.)					
Same variable without exponent:					
Real per cap. dispos. income	3.354	3.383	3.400	3.505	3.583
Employment effect	.93	.92	.91	.91	.92

JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Per Cent Changes at Annual Rates)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
MOTOR FUELS	12.02	13.35	-11.95	-6.35	4.39
Surprise Factor	0.00	.00	.15	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00	0.00
Echo Factor	0.00	0.00	0.00	-.16	0.00
Portion explained below (NS)	12.02	13.35	-12.10	-6.19	4.39
Portion explained below (SA)	10.72	14.54	-11.89	-6.45	4.34
Mult	-4.71	-2.15	-3.00	0.00	0.00
Tax Rate	16.67	12.86	-8.94	-3.92	6.89
Consumption, 72 \$, gas & oil	-.24	3.77	-.65	-2.80	-2.39
Tax effect ratio (-.23*)	-.10	-.07	.33	.21	.00
*Elasticity (power diff. from 1 to which variable is raised.)					
Same variable without exponent:					
Tax effect ratio	.41	.31	-1.38	-.88	-.01
PUBLIC UTILITIES	-23.52	70.49	22.72	1.87	18.58
Surprise Factor	0.00	.00	6.40	0.00	0.00
Processing Factor	0.00	0.00	0.00	0.00	0.00
Echo Factor	0.00	0.00	-.00	-5.60	0.00
Portion explained below (NS)	-23.52	70.49	16.32	7.48	18.58
Portion explained below (SA)	-23.16	72.97	14.20	7.10	18.38
Mult	-18.53	90.84	41.00	0.00	0.00
Corporate profits	-5.68	-9.36	-19.00	7.10	18.38
ROOM OCCUPANCY	23.87	10.01	8.59	12.12	13.84
Surprise Factor	.00	.00	.56	0.00	0.00
Processing Factor	5.61	0.00	0.00	0.00	0.00
Echo Factor	-.00	-5.22	0.00	-.59	0.00
Portion explained below (NS)	18.26	15.22	8.03	12.70	13.84
Portion explained below (SA)	18.32	14.90	8.04	13.20	13.84
Mult	9.15	7.51	4.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00	0.00
Real p. c. disp. income (.74*)	-.92	.62	.38	2.28	1.64
Disposable income	11.09	9.68	6.70	9.73	9.03
Employment effect (2.1*)	-1.54	-3.15	-3.03	.82	2.73
*Elasticity (power diff. from 1 to which variable is raised.)					
Same variable without exponent:					
Real per cap. dispos. income	-1.25	.84	.52	3.09	2.23
Employment effect	-.73	-1.52	-1.45	.39	1.29

JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Money amounts in Millions of Dollars)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
SALES--REGULAR	572.5	607.5	664.6	700.0	766.7
Surprise Factor	.0	0.0	12.7	0.0	0.0
Processing Factor	21.0	4.0	0.0	0.0	0.0
Portion explained below (NS)	551.5	603.5	652.0	700.0	766.7
Portion explained below (SA)	551.4	603.6	651.9	700.0	766.7
Mult	1.08	1.14	1.20	1.20	1.20
Tax Rate	.050	.050	.050	.050	.050
Consumption expend. net of m.v.	3459	3596	3632	3909	4285
Rel. employment effect (1.03*)	1.02	1.01	1.03	1.03	1.03
<u>Tax effect ratio (-5.5*)</u>	.76	.76	.76	.76	.76
*Elasticity (power diff. from 1 to which variable is raised.)					
Same variable without exponent:					
Relative employment effect	1.02	1.01	1.03	1.03	1.03
Tax effect ratio	1.05	1.05	1.05	1.05	1.05
 SALES--MEALS	 155.5	 164.2	 179.8	 196.0	 212.9
Surprise Factor	.0	.0	.9	0.0	0.0
Processing Factor	2.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	153.5	164.2	178.9	196.0	212.9
Portion explained below (SA)	153.6	164.3	179.0	196.2	213.1
Mult	.99	.96	.98	.98	.98
Tax Rate	.050	.050	.050	.050	.050
Disposable income	50599	55621	59407	65091	70710
<u>Tax effect ratio (-1.25*)</u>	.90	.90	.90	.90	.90
Tax effect ratio	1.05	1.05	1.05	1.05	1.05
 SALES--MOTOR VEHICLES	 132.1	 145.6	 172.4	 199.2	 225.9
Surprise Factor	.0	.0	3.5	0.0	0.0
Processing Factor	3.0	0.0	0.0	0.0	0.0
Portion explained below (NS)	129.1	145.6	168.9	199.2	225.9
Portion explained below (SA)	129.5	145.1	168.5	198.8	225.3
Mult	1.13	1.18	1.24	1.24	1.24
Tax Rate	.050	.050	.050	.050	.050
Consumption expend., motor veh.	2483	2668	2952	3482	3946
<u>Tax effect ratio (-8.0*)</u>	.68	.68	.68	.68	.68
Tax effect ratio	1.05	1.05	1.05	1.05	1.05

JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS TAX COLLECTIONS

(Per Cent Changes at Annual Rates)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
SALES—REGULAR	13.10	6.13	9.40	5.32	9.53
Surprise Factor	.00	0.00	2.10	0.00	0.00
Processing Factor	4.15	.73	0.00	0.00	0.00
Echo Factor	0.00	-4.04	-.73	-2.05	0.00
Portion explained below (NS)	8.95	9.45	8.02	7.37	9.53
Portion explained below (SA)	8.94	9.47	8.01	7.38	9.53
Mult	-1.07	6.14	5.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00	0.00
Consumption expend. net of m.v.	9.04	3.96	1.00	7.63	9.62
Rel. employment effect (1.03*)	.99	-.79	1.84	-.23	-.09
<u>Tax effect ratio (-5.5*)</u>	0.00	0.00	0.00	0.00	0.00
*Elasticity (power diff. from 1 to which variable is raised.)					
Same variable without exponent:					
Relative employment effect	.96	-.76	1.77	-.22	-.08
Tax effect ratio	0.00	0.00	0.00	0.00	0.00
SALES—MEALS	13.01	5.61	9.48	9.00	8.64
Surprise Factor	.00	.00	.54	0.00	0.00
Processing Factor	1.45	0.00	0.00	0.00	0.00
Echo Factor	-.00	-1.38	-.00	-.54	0.00
Portion explained below (NS)	11.56	6.98	8.94	9.53	8.64
Portion explained below (SA)	11.49	6.98	8.94	9.57	8.63
Mult	.32	-2.68	2.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00	0.00
Disposable income	11.13	9.93	6.81	9.57	8.63
<u>Tax effect ratio (-1.25*)</u>	0.00	0.00	0.00	0.00	0.00
Tax effect ratio	0.00	0.00	0.00	0.00	0.00
SALES—MOTOR VEHICLES	29.97	10.20	18.43	15.52	13.42
Surprise Factor	.00	.00	2.43	0.00	0.00
Processing Factor	2.95	0.00	0.00	0.00	0.00
Echo Factor	0.00	-2.56	-.00	-2.42	0.00
Portion explained below (NS)	27.02	12.76	16.00	17.95	13.42
Portion explained below (SA)	26.35	12.01	16.17	17.97	13.33
Mult	23.66	4.25	5.00	0.00	0.00
Tax Rate	0.00	0.00	0.00	0.00	0.00
Consumption expend., motor veh.	2.17	7.45	10.63	17.97	13.33
<u>Tax effect ratio (-8.0*)</u>	0.00	0.00	0.00	0.00	0.00
Tax effect ratio	0.00	0.00	0.00	0.00	0.00

JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS INCOME TAX COLLECTIONS

(Money amounts in Millions of Dollars)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
TOTAL INCOME TAX	2057.7	2324.1	2418.5	2662.8	2945.9
Portion explained below (SA)	2082.7	2355.1	2488.9	2720.6	3007.2
Mult	1.08	1.09	1.10	1.10	1.10
Earned Income Base	42417	46341	48637	52659	57573
Earned Income Tax Rate	.0538	.0538	.0538	.0538	.0538
Sources of Earned Income:					
Wages & Salaries	38679	41942	43840	47425	51775
Per Cent Taxed	97.0	97.0	97.0	97.0	97.0
Proprietors' Income	2443	2469	2707	3057	3373
Per Cent Taxed	67.0	67.0	67.0	67.0	67.0
Pensions & Annuities	857	937	1036	1146	1258
Per Cent Taxed	51.0	51.0	51.0	51.0	51.0
Interest (at earned rate)	3683	4838	5391	5750	6350
Per Cent Taxed	45.0	45.0	45.0	45.0	45.0
Other	2309	2570	2757	2956	3225
Per Cent Taxed	52.5	52.5	52.5	52.5	52.5
Unearned Income Base	2132	2362	2489	2654	2931
Unearned Income Tax Rate	.1075	.1075	.1075	.1075	.1075
Sources of Unearned Income:					
Dividends	1846	2062	2298	2451	2706
Per Cent Taxed	60.4	60.4	60.4	60.4	60.4
Capital Gains	576	482	358	382	422
Statutory Per Cent Taxed	70.0	50.0	40.0	40.0	40.0
Per Cent of Stat. C.G. Taxed	80.0	80.0	80.0	80.0	80.0
Interest (at unearned rate)	921	1209	1348	1438	1587
Per Cent Taxed	60.4	60.4	60.4	60.4	60.4
Total Deductions & Exemptions	10573	10844	11525	11968	12596
Basic Exemption (Wage earners)	5367	5324	5777	5858	6018
Basic Exemption (Self-employed)	327	332	385	391	403
Blindness	6	6	6	6	6
Day Care	402	402	400	400	400
Dependents	1125	1093	1077	1073	1074
Elderly	274	279	284	289	295
Separate Filing	-11	-11	-12	-12	-12
Non-working Spouses	352	352	352	342	328
Retirement Contributions	2223	2516	2689	2993	3403
Other deductions	197	217	229	249	271
Other Exemptions	321	354	374	407	443

JANUARY CONTROL FORECAST

(T5)

ANALYSIS OF MASSACHUSETTS INCOME TAX COLLECTIONS
(Per Cent Changes at Annual Rates)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
TOTAL INCOME TAX	10.63	12.95	4.06	10.10	10.63
Portion explained below (SA)	11.97	13.08	5.69	9.31	10.53
Mult	-.34	1.49	1.00	0.00	0.00
Earned Income Base	10.52	9.25	4.95	8.27	9.33
Earned Income Tax Rate	0.00	0.00	0.00	0.00	0.00
Sources of Earned Income:					
Wages & Salaries	10.37	8.44	4.52	8.18	9.17
Per Cent Taxed	0.00	0.00	0.00	0.00	0.00
Proprietors' Income	3.86	1.06	9.64	12.95	10.34
Per Cent Taxed	0.00	0.00	0.00	0.00	0.00
Pensions & Annuities	8.26	9.41	10.55	10.59	9.74
Per Cent Taxed	0.00	0.00	0.00	0.00	0.00
Interest (at earned rate)	19.51	31.34	11.44	6.66	10.43
Per Cent Taxed	0.00	0.00	0.00	0.00	0.00
Other	12.02	11.29	7.28	7.21	9.12
Per Cent Taxed	0.00	0.00	0.00	0.00	0.00
Unearned Income Base	8.56	10.80	5.37	6.66	10.43
Unearned Income Tax Rate	0.00	0.00	0.00	0.00	0.00
Sources of Unearned Income:					
Dividends	12.85	11.71	11.44	6.66	10.43
Per Cent Taxed	0.00	0.00	0.00	0.00	0.00
Capital Gains	-9.72	-16.21	-25.71	6.66	10.43
Statutory Per Cent Taxed	-22.22	-28.57	-20.00	0.00	0.00
Per Cent of Stat. C.G. Taxed	0.00	0.00	0.00	0.00	0.00
Interest (at unearned rate)	19.51	31.34	11.44	6.66	10.43
Per Cent Taxed	0.00	0.00	0.00	0.00	0.00
Total Deductions & Exemptions	4.03	2.56	6.28	3.84	5.25
Basic Exemption (Wage earners)	.78	-.79	8.50	1.40	2.73
Basic Exemption (Self-employed)	-.16	1.51	16.05	1.48	2.94
Blindness	.22	.67	.64	.60	.58
Day Care	.05	-.07	-.39	-.20	-.01
Dependents	-2.76	-2.83	-1.45	-.45	.13
Elderly	1.37	1.77	2.01	1.86	1.86
Separate Filing	NM	NM	NM	NM	NM
Non-working Spouses	4.98	.02	-.03	-2.85	-4.12
Retirement Contributions	16.21	13.19	6.85	11.31	13.70
Other deductions	11.85	10.08	5.88	8.71	8.84
Other Exemptions	11.85	10.08	5.88	8.71	8.84

JANUARY CONTROL FORECAST

(T5)

SUMMARY REPORT

MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL

(Units as Indicated)

	Fiscal 1981	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985
Employment—Total Nonag.*	2657	2636	2600	2637	2710
% Change	.8	-.8	-1.4	1.4	2.8
Manufacturing*	668	654	607	600	618
% Change	-1.4	-2.2	-7.2	-1.0	2.9
Non-Manufacturing*	1989	1982	1994	2037	2092
% Change	1.6	-.3	.6	2.2	2.7
Unemployment Rate	5.7	7.5	8.0	7.8	6.6
Employment Rate Index**	105.8	103.8	101.2	101.9	103.9
% Change	-.3	-2.0	-2.4	.6	2.0
Relative to U.S. Index**	102.8	102.0	102.6	102.3	101.9
Rate of Wage Change	8.7	8.4	6.7	6.5	6.0
Wage Index Rel. to U.S.**	93.0	93.3	94.0	94.2	94.4
Avg. Weekly Hours in Mfg.	40.0	39.8	39.4	40.0	40.3
Rate of Price Inflation	12.0	7.2	5.5	5.8	6.0
Relative to U.S. CPI**	96.6	95.3	95.6	96.0	96.3
Personal Income (mil\$)	60942	67083	71030	77216	84043
% Change	11.9	10.1	5.9	8.7	8.8
Disposable Income (mil\$)	50599	55621	59407	65091	70710
% Change	11.1	9.9	6.8	9.6	8.6
Real Per Cap. D.I. Index**	102.6	104.5	105.1	108.2	110.2
Relative to U.S.**	102.0	104.1	104.3	103.9	103.2
Rel. Business Cost Index**	95.9	95.5	96.3	96.6	96.7
Manufacturing**	95.5	94.5	95.4	95.6	95.7
<u>Non-Manufacturing**</u>	96.1	96.0	96.7	97.0	97.1

*Thousands of people.

**Indexes equal 100 in calendar 1973.

Adjustments to the MRAF Forecast, January 1983

The default multiplicative factors based on Fiscal Year 1982 were adjusted to reflect collections experience in the 12-month period ending December 31, 1982. The following taxes were affected:

Alcoholic Beverages	down	2%
Commercial Banks	up	1%
Savings Banks	up	8%
Cigarettes	up	1%
Corporations	up	13%
Deeds	down	9%
Estate and Inheritance	down	5%
Income	up	1%
Insurance	up	13%
Motor Fuel	down	3%
Public Utilities	up	41%
Room Occupancy	up	4%
Regular Sales	up	5%
Meals Sales	up	2%
Motor Vehicle Sales	up	5%

The processing factor for the personal income tax has two components:

(1) The loss to the state from the increase in the basic exemption for calendar year 1982 (net of the reduction in withholding which went into effect too late to cover it fully) is estimated to be \$16 million in Fiscal Year 1983.

(2) The loss due to the rental deduction, not explicitly forecast by the model, is estimated to be \$55 million in FY83 and \$59 million in FY84.



